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SUPPLEMENT I

TO

TECHNICAL REPORT 46

BASIC DATA FROM C-123/MC-1 CALIBRATION TRIALS 1963

Sponsored by

Advanced Research Projects Agency
Project Agile
ARPA Order 256

JUNE 1964

UNITED STATES ARMY
BIOLOGICAL LABORATORIES
FORT DETRICK

U.S. ARMY BIOLOGICAL LABORATORIES
Fort Detrick, Frederick, Maryland

SUPPLEMENT I
to
TECHNICAL REPORT 46

BASIC DATA FROM C-123/MC-1 CALIBRATION TRIALS 1963

This research was supported by the Advanced Research Projects Agency Project Agile under ARPA Order 256.

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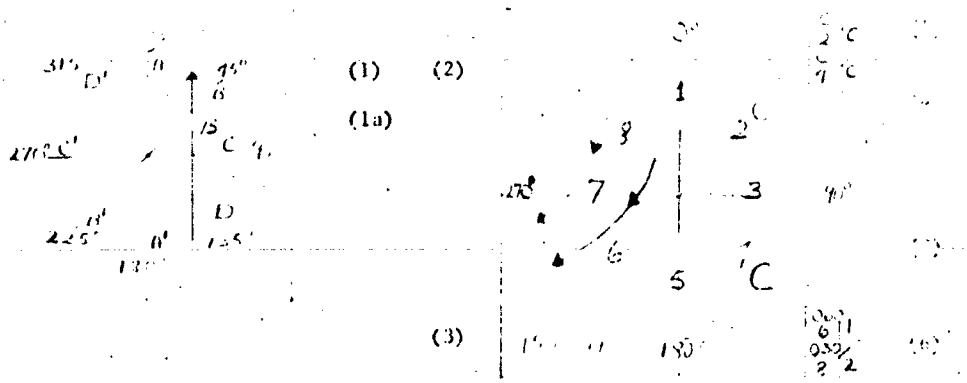
Crops Division
DIRECTOR OF BIOLOGICAL RESEARCH

Project ARPA Order 256 June 1964

INTRODUCTION

This supplement concerns the calibration of a modified C-123/MC-1 spray system and presents the basic data and spray deposit patterns obtained in 128 test flights at Eglin Air Force Base between 10 May and 16 July 1963. The data are presented in the sequence of ground flow determinations, mass median diameter calculations, and mass deposit measurements.

SAMPLE AND EXPLANATION OF METEOROLOGICAL DATA



(1) & (1a) — Aircraft course; Station No. aircraft crossed

(5) Calm; Met. data station

(2) Wind current

(6) Wind direction in degrees; Met. data station; Wind speed mph; Wind speed mph

(3) 150ft — Altitude in feet, met. data obtained

(4) C — Calm

(7)

Sky Conditions

Example:	25	1	100	11	/	+	7
	1	2	3	4	5	6	7

1 - Cloud cover height in hundreds of feet

2 - Cloud Amount
- 0 - No clouds
- 1 - Fair weather cumulus
- 11 - Variable sky

3 - Second cloud cover height in hundreds of feet

4 - Cloud Amount

5 - Barometric Tendency
- / Rising
- Steady

6 - Overcast

7 - Visibility in miles

Remarks

GFH	Ground Fog Heavy	N	North
OCNL	Occasional	E	East
C	Clouds	S	South
CLR	Clear	W	West
CU	Cumulus	LTG	Lightning
CB	Cumulo-nimbus	H	Haze
FQT	Frequent	S	Smoke

C-123/RC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 9 May 1963 DATE TEST FLOWN: [illegible]

FLUID SPRAYED: Purple TOTAL NOZZLES USED: [illegible]

NOZZLE TYPE: 650120 FLOW RATE: [illegible]

DURATION OF SPRAY: 20 Sec. PUMP PRESSURE: No. 1 50 PSI [illegible]

PUMP R.P.M.: 3000 before spray : No. 2 50 PSI [illegible]

NO. OF PUMPS: 2 FLOW METER READING: [illegible]

TOTAL AMOUNT SPRAYED: 139.5 Gals. FLOW RATE CALIBRATION: [illegible]

NOZZLE CONFIGURATION: WING: 1-7, 15-22, 31-39
TAIL: 1-19 (odd numbers only)

OPERATIONAL DATA DURING FLIGHT

GEN #	RPM	PSI BEFORE	PSI DURING	FM FLOWMETER
1	3700		90	550

REMARKS: Operator overran engines on all flights.

MASS MEDIAN DIAMETER

DATE: 10 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 1 PAPER: Kromekote, white

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 550 GPM (App) SYSTEM: C-123/MC-1

Sta.	Drop #	Size	Sta.	Drop #	Size
99	3	7700			
99	16	6900			
99	15	6500			
99	12	6100			
99	19	5600*			
99	14	5500			
99	13	5400			
99	17	5300			
99	18	5200			
99	20	5100			

$$MMD = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(5600)}{2.5} = 348.7 \text{ microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7700) = 1172.3 Microns

Min. Sph. Dia. = 36 microns

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 550 GPM

DATE: 10 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 100 feet

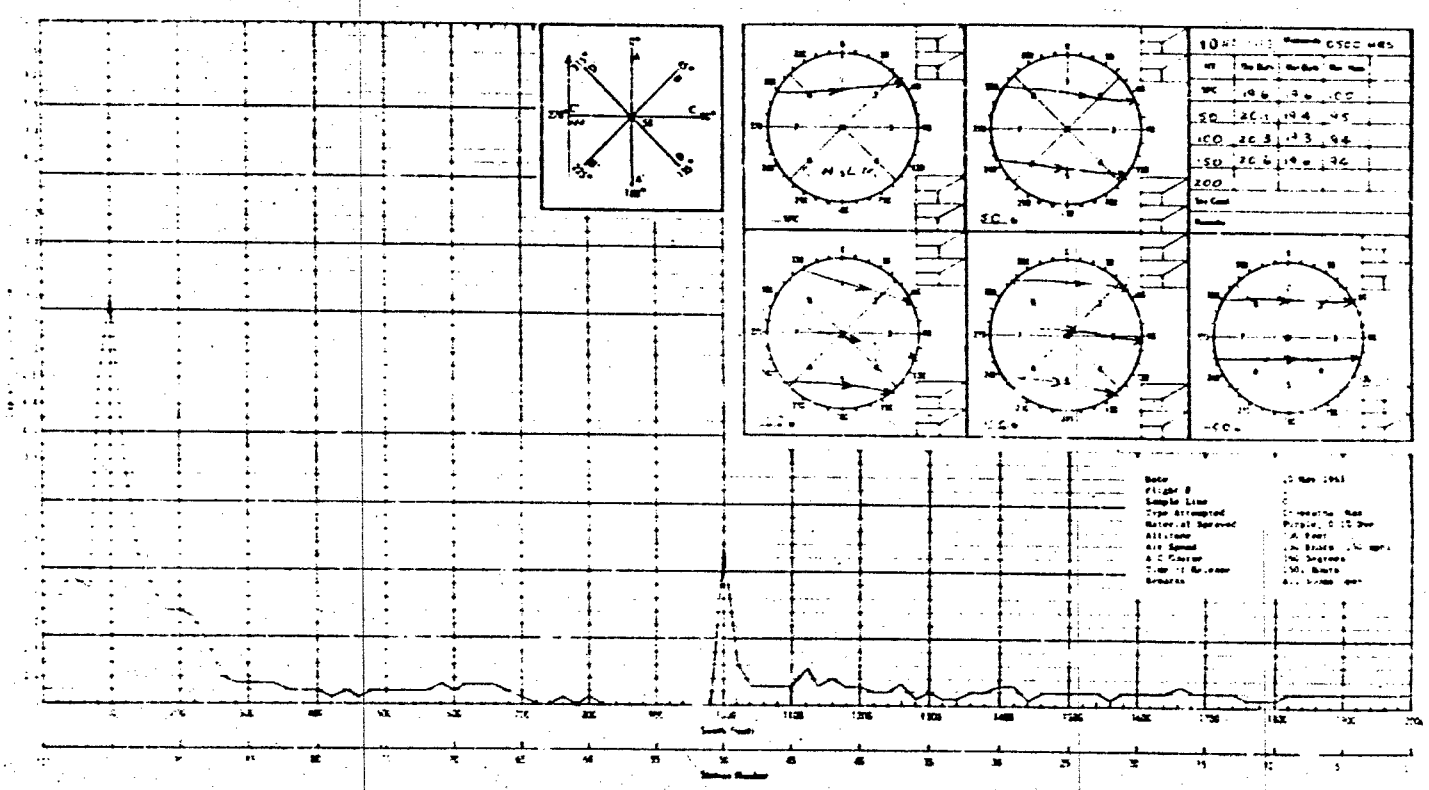
TIME OF RELEASE: 0501 hours

AIRCRAFT COURSE: 360 degrees

DURATION: 11 seconds

WIND VECTOR: 258° / 4.8 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.2	26	0.2	51	0.0	76	0.2
2	0.2	27	0.2	52	0.0	77	0.1
3	0.2	28	0.1	53	0.0	78	0.2
4	0.2	29	0.3	54	0.0	79	0.1
5	0.2	30	0.3	55	0.0	80	0.2
6	0.2	31	0.2	56	0.0	81	0.2
7	0.2	32	0.2	57	0.0	82	0.2
8	0.2	33	0.1	58	0.0	83	0.3
9	0.2	34	0.1	59	0.0	84	0.3
10	0.1	35	0.2	60	0.1	85	0.3
11	0.1	36	0.1	61	0.0	86	0.3
12	0.1	37	0.3	62	0.1	87	0.4
13	0.2	38	0.2	63	0.0	88	0.9
14	0.2	39	0.2	64	0.0	89	1.3
15	0.2	40	0.3	65	0.1	90	1.4
16	0.2	41	0.3	66	0.2	91	1.4
17	0.3	42	0.4	67	0.3	92	1.7
18	0.2	43	0.3	68	0.3	93	2.2
19	0.2	44	0.5	69	0.3	94	3.5
20	0.2	45	0.3	70	0.3	95	5.9
21	0.2	46	0.3	71	0.3	96	4.7
22	0.1	47	0.3	72	0.2	97	1.7
23	0.2	48	0.3	73	0.2	98	1.9
24	0.2	49	0.[illegible]	74	0.2	99	1.6
25	0.2	50	2.[illegible]	75	0.2	100	blank



MASS DEPOSIT

MATERIAL: Purple

DATE: 10 May 1965

FLIGHT #: 2

SAMPLE LINE: A

TIME OF RELEASE: 0528 hours

DURATION: 17 seconds

FLOW RATE: 550 (App) GPM

SYSTEM: C-123/MC-1

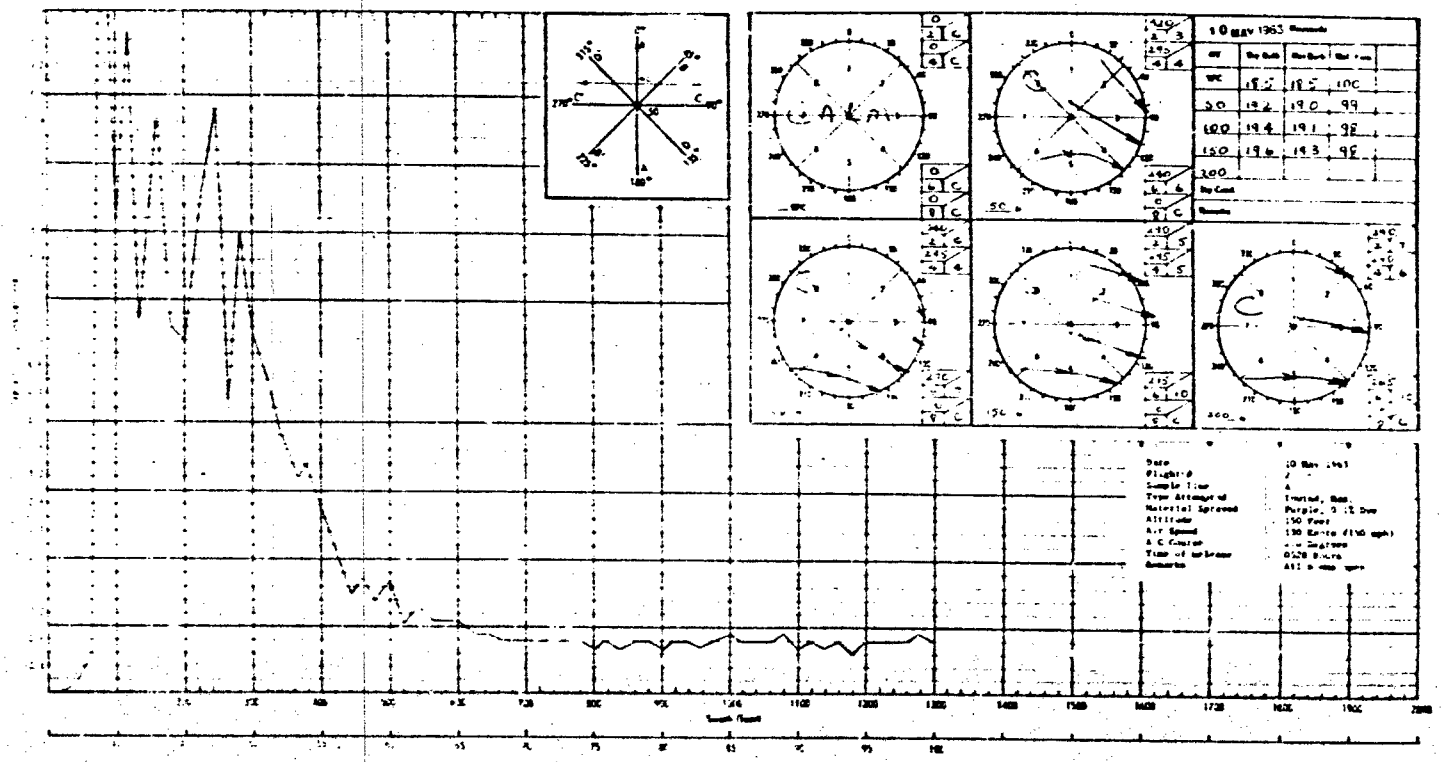
AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150' feet

AIRCRAFT COURSE: 270 degrees

WIND VECTOR: 288° / 5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-36 blank				51	4.6	76	0.8
				52	3.8	77	0.7
				53	3.2	78	0.8
				54	3.4	79	0.8
				55	2.8	80	0.7
				56	2.1	81	0.8
				57	1.5	82	0.8
				58	1.7	83	0.7
				59	1.4	84	0.8
				60	1.7	85	0.9
				61	1.1	86	0.8
		37	0.1	62	1.3	87	0.8
		38	0.6	63	1.1	88	0.8
		39	14.8	64	1.1	89	0.9
		40	7.0	65	1.1	90	0.7
		41	9.7	66	0.9	91	0.8
		42	5.5	67	0.9	92	0.7
		43	8.5	68	0.8	93	0.8
		44	5.4	69	0.8	94	0.6
		45	5.2	70	0.8	95	0.8
		46	7.2	71	0.8	96	0.8
		47	8.6	72	0.8	97	0.8
		48	4.3	73	0.8	98	0.8
		49	6.8	74	0.8	99	0.9
		50	5.3	75	0.7	100	0.8


10 MAY 1963
Date
Flight #
Sample Time
Type Attempted
Material Sprayed
Altitude
Air Speed
Time of release
Remarks

MASS DEPOSIT

MATERIAL: Purple

DATE: 10 May 1963

FLIGHT #. 3

SAMPLE LINE: A

TIME OF RELEASE: 0555 hours

DURATION: 22 seconds

FLOW RATE. 550 (App) GPM

SYSTEM: C-123/MC-1

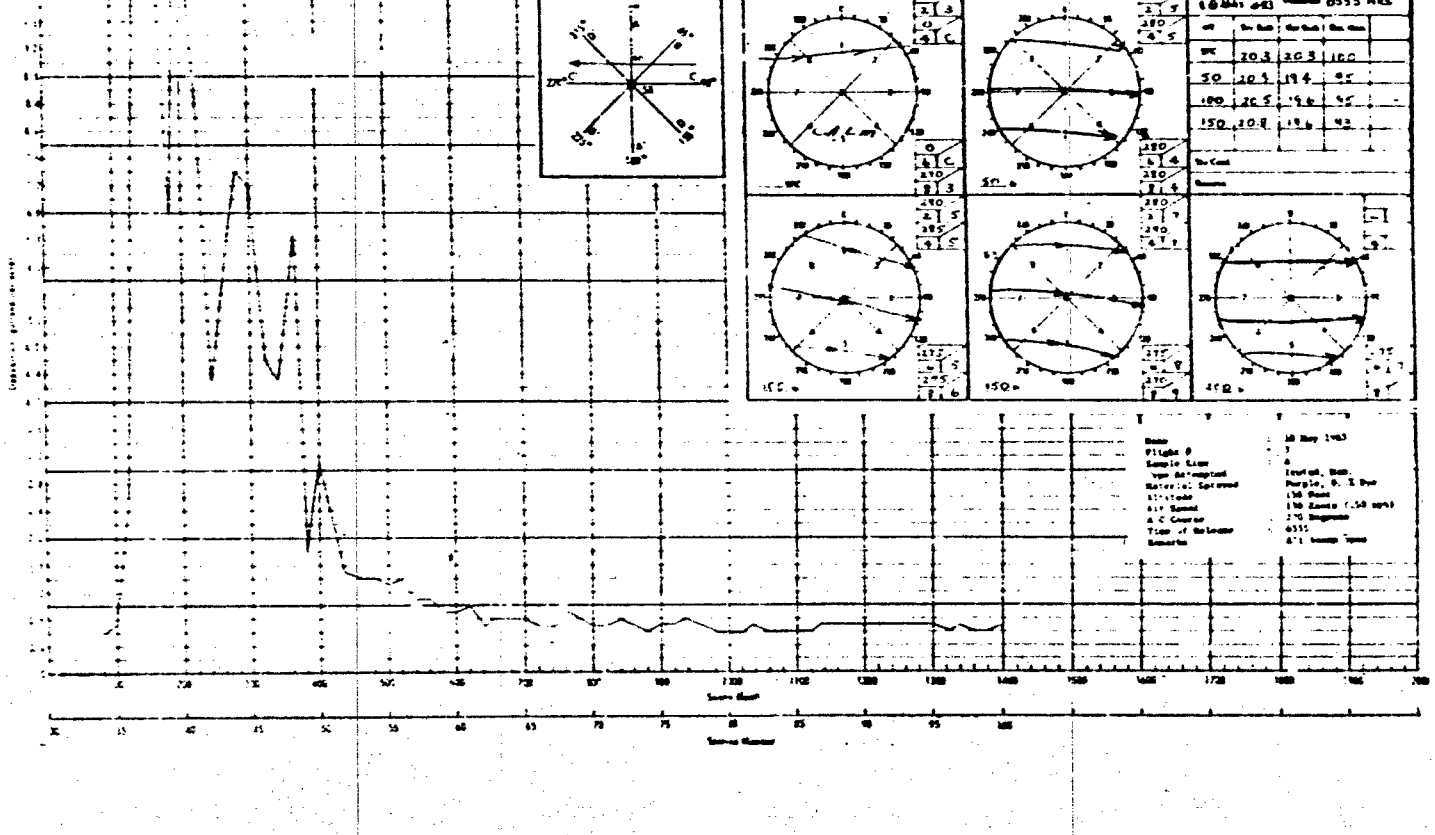
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 270 degree

WIND VECTOR: 284° / 4.5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-33 blank				51	2.2	76	0.7
				52	1.5	77	0.8
				53	1.4	78	0.7
				54	1.4	79	0.6
				55	1.3	80	0.6
				56	1.4	81	0.6
				57	1.1	82	0.7
				58	1.1	83	0.6
		34	0.6	59	0.9	84	0.6
		35	0.7	60	0.9	85	0.6
		36	2.5	61	1.0	86	0.6
		37	11.0	62	0.7	87	0.7
		38	11.2	63	0.8	88	0.7
		39	6.8	64	0.8	89	0.7
		40	12.9	65	0.8	90	0.7
		41	8.5	66	0.7	91	0.7
		42	4.3	67	0.7	92	0.7
		43	6.4	68	0.9	93	0.7
		44	7.2	69	0.8	94	0.7
		45	7.0	70	0.7	95	0.7
		46	4.6	71	0.7	96	0.6
		47	4.3	72	0.8	97	0.7
		48	6.5	73	0.7	98	0.6
		49	1.8	74	0.6	99	0.6
		50	3.1	75	0.7	100	0.7



MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 550 (App) GPM

DATE: 10 May 1963

SYSTEM: G-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 feet

TIME OF RELEASE: 0621 hours

AIRCRAFT COURSE: 270 degrees

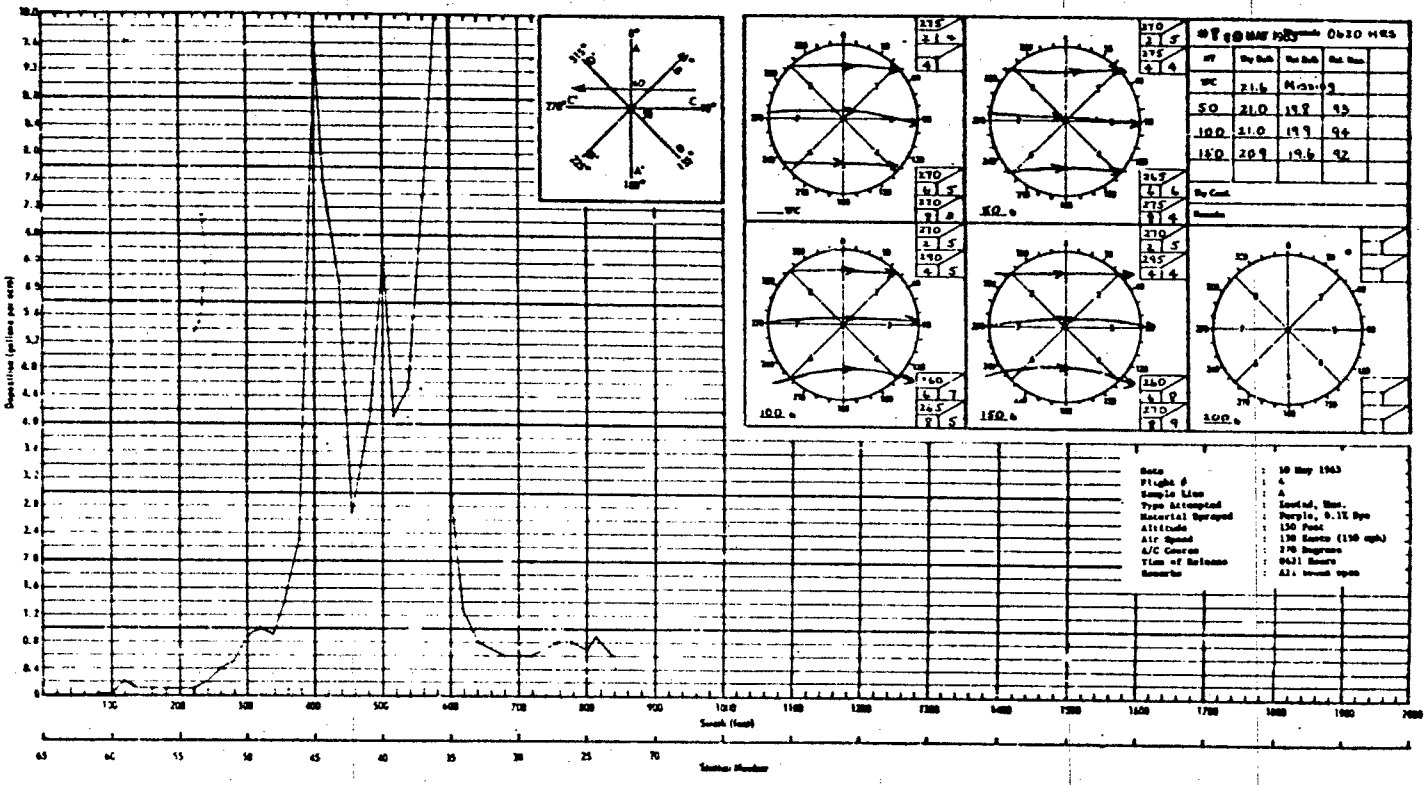
DURATION: 23 seconds

WIND VECTOR: 267° / 5.8

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-22 blank		26	0.8	51	0.5		
		27	0.8	52	0.4		
		28	0.7	53	0.2		
		29	0.6	54	0.1		
		30	0.6	55	0.1		
		31	0.6	56	0.1		
		32	0.7	57	0.1		
		33	0.8	58	0.1		
		34	1.3	59	0.2		
		35	3.0	60	0.0		
		36	16.4	61	0.0		
		37	7.4	62-100 blank			
		38	4.5				
		39	4.1				
		40	6.5				
		41	4.1				
		42	2.7				
		43	6.1				
		44	7.5				
		45	9.6				
		46	2.3				
22		47	1.4				
23	0.6	48	0.9				
24	0.9	49	1.0				
25	0.7	50	0.9				

$$\% \text{ Recovery} = \frac{0.202 \times 150 \times 89.3 \times 30.0}{550} = 98.4$$

Total 89.3


Deposition (gallons per acre)
Swath (feet)
Station Number
0620 HRS
WC
50
100
150
200
Date : 10 May 1963
Flight # : 4
Sample Line : A
Type Attempted : Sealed, Wet.
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 270 Degrees
Time of Release : 0621 Hours
Remarks : All bound open

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 9 May 1963

DATE TEST FLOWN: 11 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 58

NOZZLE TYPE: U50120

LIQUID TEMP: 32° C

DURATION OF SPRAY: 20 Sec.

PUMP PRESSURE: No. 1 84 psi before 50 psi during

PUMP R.P.M.: 3000 before spray

: No. 2 82 psi before 50 psi during

NO. OF PUMPS: 2

FLOW METER READING: 405-410 GPM

TOTAL AMOUNT SPRAYED: 139.5 Gals.

FLOW RATE CALIBRATED: 418.5 GPM

NOZZLE CONFIGURATION: WING: 1-7, 15-22, 31-39
TAIL: 1-19 (odd numbers only)

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1			No. 1 - 80	400 ± 20

REMARKS: Front engine malfunction.

MASS MEDIAN DIAMETER

DATE: 11 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 2 PAPER: Kromekote

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 418.5 GPM SYSTEM: C-123/MC-1

Sta.	Drop #	Size	Sta.	Drop #	Size
96	2	7500			
96	1	7400*			
96	3	7200			
96	6	7100			
96	5	7000			
96	7	6900			
96	4	6700			
96	8	6600			
96	9	6500			
96	10	6300			

$$\text{MMD} = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(7400)}{2.5} = 457.6 \text{ microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7500) = 1144 Microns

Min. Sph. Dia. = 36 microns

MASS MEDIAN DIAMETER

DATE: 11 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 3 PAPER: Kromekote

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 418.5 GPM SYSTEM: C-123/MC-1

Sta.	Drop #	Size	Sta.	Drop #	Size
95	3	7000			
95	4	6700*			
95	9	6600			
95	8	6500			
95	10	6400			
95	11	6300			
95	5	6200			
95	7	6000			
95	6	5900			
95	2	5800			
95	1	5700			

$$MMD = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(6700)}{2.5} = 411.6 \text{ microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7000) = 1072.1 Microns

Min. Sph. Dia. = 36 Microns

MASS DEPOSIT

MATERIAL: Purple, 0.1% Dye

DATE: 11 May 1963

FLIGHT #: 1

SAMPLE LINE: B

TIME OF RELEASE: 0530 hours

DURATION: 18 seconds

FLOW RATE: 418.5 GPM

SYSTEM: C-123/MC-1

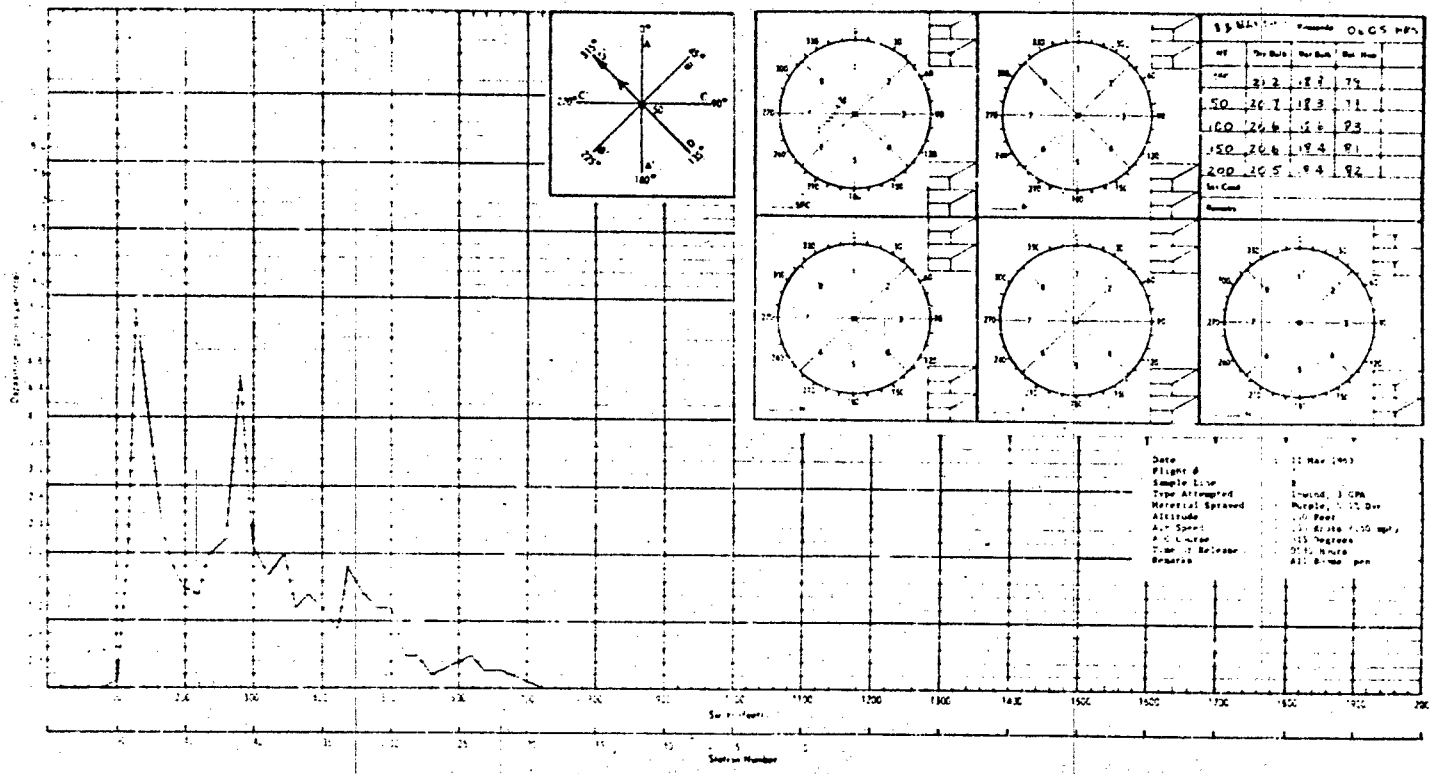
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 315 degrees

WIND VECTOR: 286° / 6.8 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.0	26	0.3	Stations 51-100 blank			
2	0.0	27	0.2				
3	0.0	28	0.5				
4	0.0	29	0.5				
5	0.0	30	1.2				
6	0.0	31	1.2				
7	0.0	32	1.4				
8	0.0	33	1.8				
9	0.0	34	0.9				
10	0.0	35	1.2				
11	0.0	36	1.4				
12	0.0	37	1.2				
13	0.0	38	2.0				
14	0.0	39	1.7				
15	0.0	40	2.1				
16	0.0	41	4.6				
17	0.0	42	2.2				
18	0.0	43	2.0				
19	0.0	44	1.4				
20	0.1	45	1.5				
21	0.2	46	1.8				
22	0.3	47	2.3				
23	0.3	48	5.6				
24	0.5	49	2.0				
25	0.4	50	0.1				


Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Sample Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 11 May 1963

FLIGHT #: 2

SAMPLE LINE: C

TIME OF RELEASE: 0550 hours

DURATION: 18 seconds

FLOW RATE: 418.5 GPM

SYSTEM: C-123, MC-1

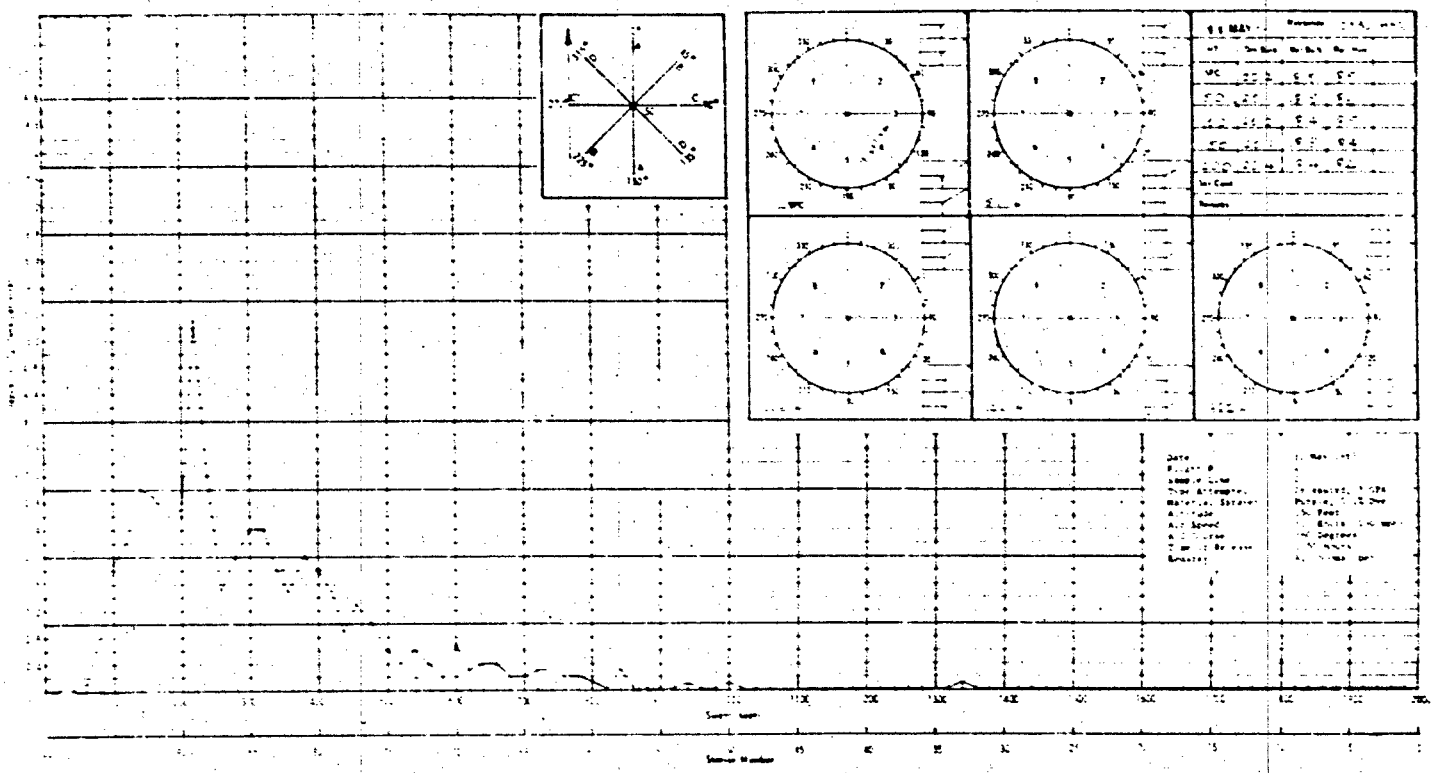
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 360 degrees

WIND VECTOR: 273° / 6.6 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.0	26	0.0	51	0.0	76	1.0
2	0.0	27	0.0	52	0.0	77	1.3
3	0.0	28	0.0	53	0.1	78	0.9
4	0.0	29	0.0	54	0.0	79	1.5
5	0.0	30	0.0	55	0.0	80	1.8
6	0.0	31	0.0	56	0.0	81	2.0
7	0.0	32	0.0	57	0.0	82	1.5
8	0.0	33	0.1	58	0.3	83	1.8
9	0.0	34	0.0	59	0.0	84	2.4
10	0.0	35	0.0	60	0.1	85	2.4
11	0.0	36	0.0	61	0.2	86	2.0
12	0.0	37	0.0	62	0.2	87	1.5
13	0.0	38	0.0	63	0.3	88	3.2
14	0.0	39	0.0	64	0.3	89	5.5
15	0.0	40	0.0	65	0.2	90	2.7
16	0.0	41	0.0	66	0.2	91	2.6
17	0.0	42	0.0	67	0.4	92	2.9
18	0.0	43	0.0	68	0.4	93	3.0
19	0.0	44	0.0	69	0.3	94	2.2
20	0.0	45	0.0	70	0.7	95	1.9
21	0.0	46	0.0	71	0.2	96	0.8
22	0.0	47	0.0	72	0.4	97	0.1
23	0.0	48	0.0	73	0.6	98	0.0
24	0.0	49	0.0	74	0.4	99	0.0
25	0.0	50	0.1	75	0.5	100	0.0



MASS DEPOSIT

MATERIAL: Purple

DATE: 11 May 1963

FLIGHT #: 3

SAMPLE LINE: C

TIME OF RELEASE: 0608 hours

DURATION: 16 seconds

FLOW RATE: 418.5 GPM

SYSTEM: C-1-3/MC-1

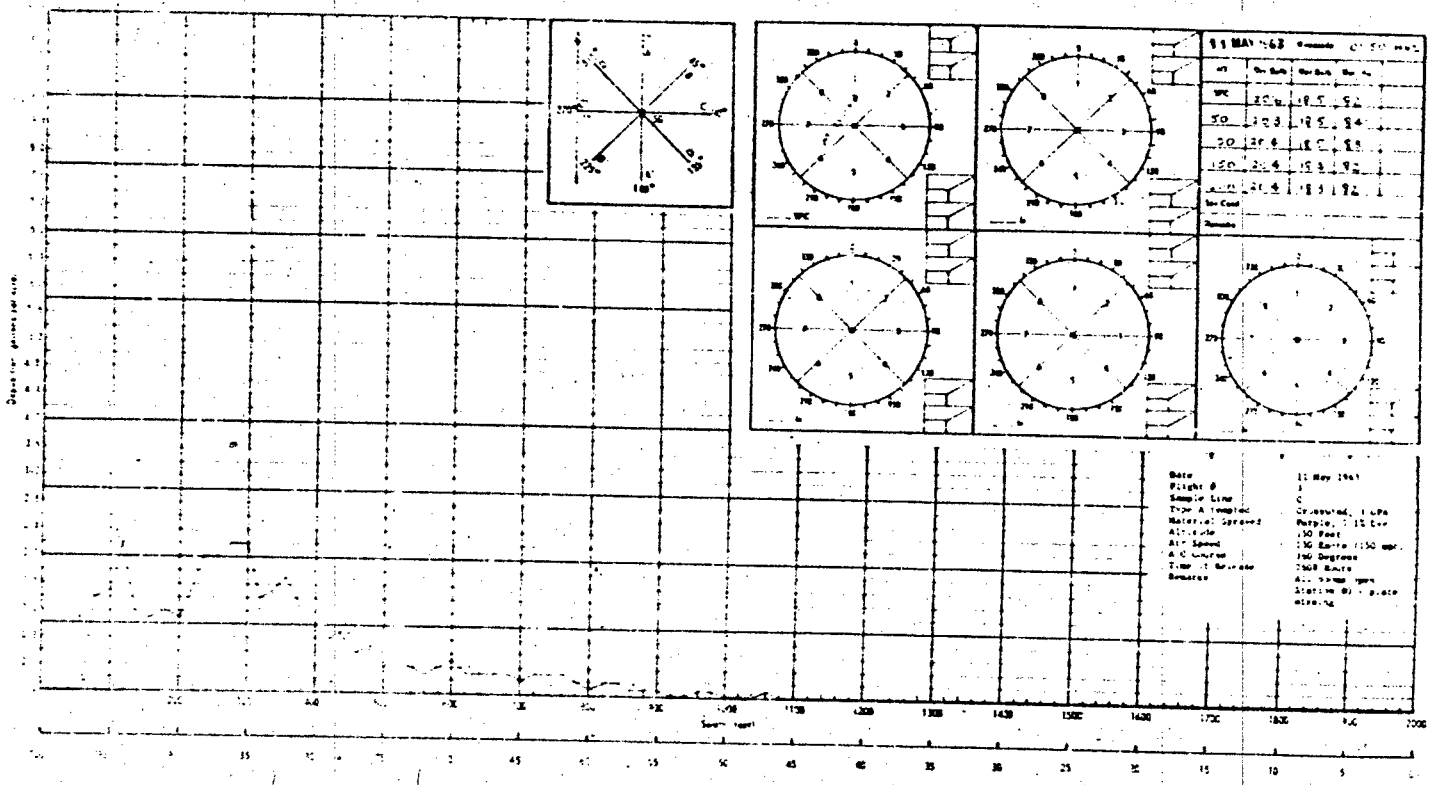
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 360 degrees

WIND VECTOR: 263° / 7.0

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.0	26	0.0	51	0.1	76	0.7
2	0.0	27	0.0	52	0.1	77	0.6
3	0.0	28	0.0	53	0.0	78	0.9
4	0.0	29	0.0	54	0.0	79	0.8
5	0.0	30	0.0	55	0.1	80	1.3
6	0.0	31	0.0	56	0.1	81	1.3
7	0.0	32	0.0	57	0.1	83	2.7
8	0.0	33	0.0	58	0.2	83	1.5
9	0.0	34	0.0	59	0.2	84	1.4
10	0.0	35	0.0	60	0.1	85	2.2
11	0.0	36	0.0	61	0.2	86	2.2
12	0.0	37	0.0	62	0.3	87	2.0
13	0.0	38	0.0	63	0.3	88	2.0
14	0.0	39	0.0	64	0.3	89	1.5
15	0.0	40	0.0	65	0.2	90	1.1
16	0.0	41	0.0	66	0.3	91	1.2
17	0.0	42	0.0	67	0.3	92	1.1
18	0.0	43	0.0	68	0.3	93	1.1
19	0.0	44	0.0	69	0.3	94	2.2
20	0.0	45	0.0	70	0.5	95	1.5
21	0.0	46	0.0	71	0.4	96	1.4
22	0.0	47	0.1	72	0.3	97	0.2
23	0.0	48	0.0	73	0.4	Stations 98-100	
24	0.0	49	0.0	74	0.5	Blank	
25	0.0	50	0.0	75	0.6		


Date
Flight #
Sample Line
Type A Sampler
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Purple, 15 Cor
150 Feet
150 Degrees
Station #1 - place
Swath Width
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 11 May 1963

DATE TEST FLOWN: 12 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 69

NOZZLE TYPE: U50120

LIQUID TEMP: 32° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: No. 1 84 psi before 50 psi during

PUMP R.P.M.: 3000 before spray

: No. 2 84 psi before 50 psi during

NO. OF PUMPS: 2

FLOW METER READING: 405 GPM

TOTAL AMOUNT SPRAYED: 105.5 Gals.

FLOW RATE CALIBRATED: 422 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-22, 31-43
TAIL: 1-3, 10, 17-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1		85	28	290
2		85	46	290
3		85	50	400
4		85	50	400

REMARKS: Airlock in forward pump during 1st & 2nd run.

MASS MEDIAN DIAMETER

DATE: LG 12 May 1963

CONVERSION FACTORL 2.5

FLIGHT #: 4

PAPER: Kromekote

SAMPLE LINE: D

MATERIAL: Purple

FLOW RATE: 422 GPM

SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
99	5	5600*			
100	2	5400			
100	3	5200			
100	4	5100			
100	1	5000			
98	7	4900			
98	6	4800			
98	8	4700			
100	9	4600			
98	10	4500			

$$\text{MMD} = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(5600)}{2.5} = 348.7 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431 (5600) = 871.8 Microns

Min. Sph. Dia. = 36 Microns

MASS DEPOSIT

MATERIAL: Purple

DATE: 12 May 1963

FLIGHT #: 1

SAMPLE LINE: A

TIME OF RELEASE: 0448 hours

DURATION: 15 seconds

FLOW RATE: 422 GPM

SYSTEM: C-123/MC-1

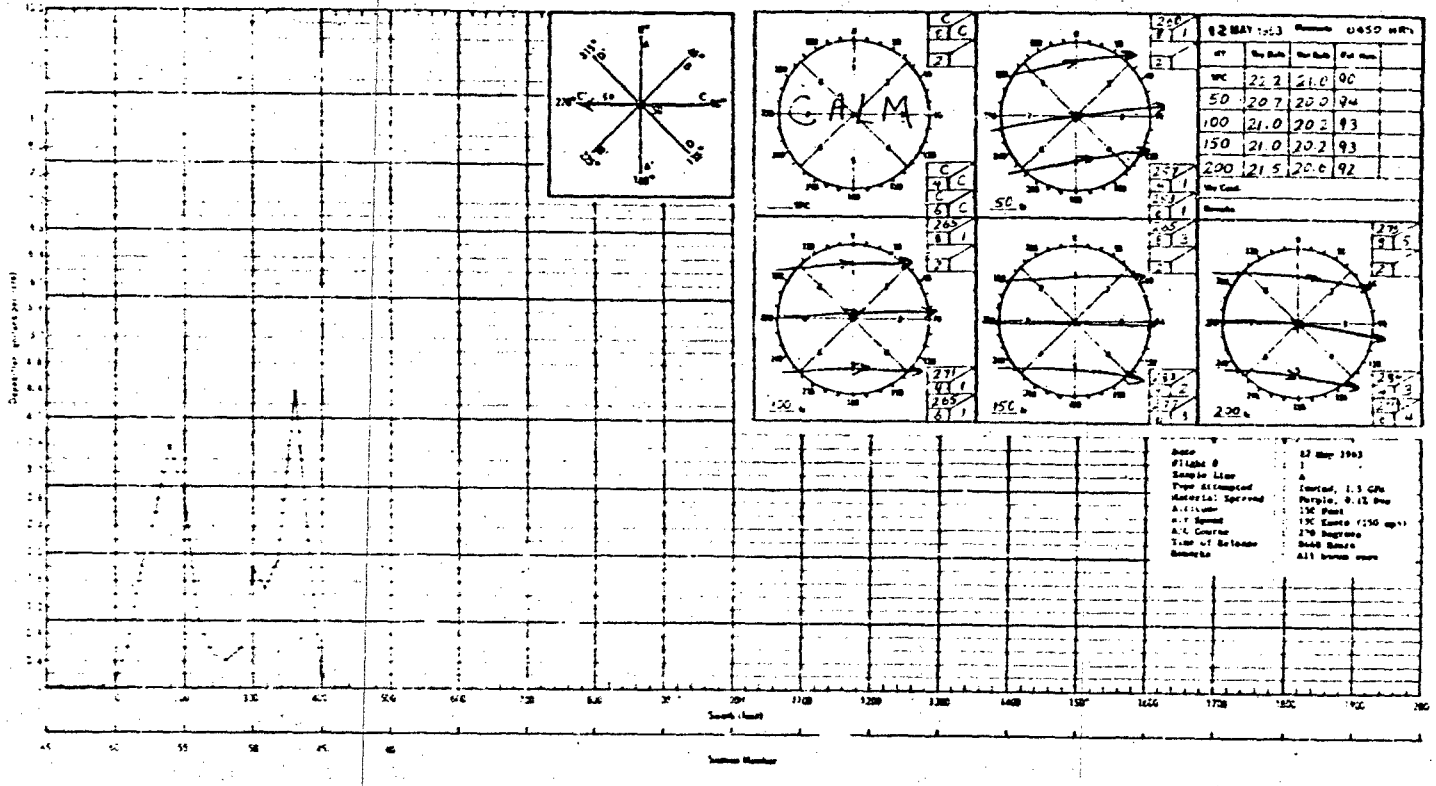
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 270 degrees

WIND VECTOR 273° / 2.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-42 blank		43	0.0				
		44	0.0				
		45	0.2				
		46	2.2				
		47	4.4				
		48	1.9				
		49	1.5				
		50	1.8				
		51	0.6				
		52	0.4				
		53	0.5				
		54	1.0				
		55	2.9				
		56	3.6				
		57	2.6				
		58	1.7				
		59	0.6				
		60	0.1				
		61	0.0				
		62	0.0				
		63	0.0				
		Stations 64-100 blank					


CALM
50
100
150
200
Date
Flight #
Sample time
Type attempted
Material: Spread
Altitude
A/C Speed
A/C Course
Time of Release
Remarks
Seconds (Real)
Sample Number

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 422 GPM

DATE: 12 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 2

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 feet

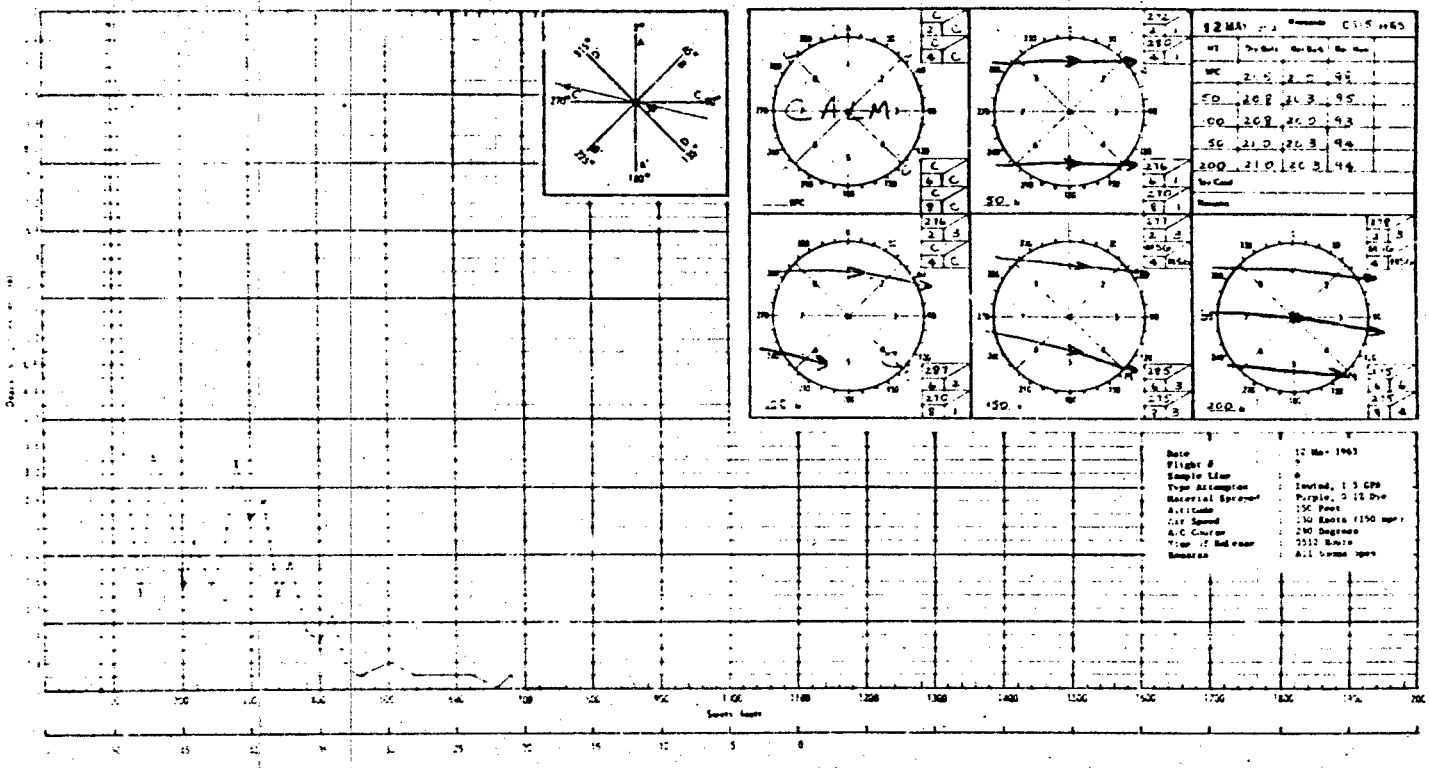
TIME OF RELEASE: 0512 hours

AIRCRAFT COURSE: 290 degrees

DURATION: 18 seconds

WIND VECTOR: 277° / 2.5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-16 blank		17	0.0	42	2.1		
		18	0.0	43	1.5		
		19	0.0	44	2.2		
		20	0.0	45	1.5		
		21	0.2	46	3.0		
		22	0.0	47	3.5		
		23	0.1	48	1.4		
		24	0.2	49	3.5		
		25	0.2	50	13.3		
		26	0.2	51	0.0		
		27	0.2	Stations 52-100 blank			
		28	0.2				
		29	0.3				
		30	0.4				
		31	0.3				
		32	0.2				
		33	0.3				
		34	1.1				
		35	0.7				
		36	0.9				
		37	1.9				
		38	1.4				
		39	2.8				
		40	2.5				
		41	3.4				


CALM
Date
Flight #
Sample Line
Type Atomizer
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: Purple

DATE: 12 May 1963

FLIGHT #: 3

SAMPLE LINE: A

TIME OF RELEASE: 0541 hours

DURATION: 18 seconds

FLOW RATE: 422 GPM

SYSTEM: C-123/MC-1

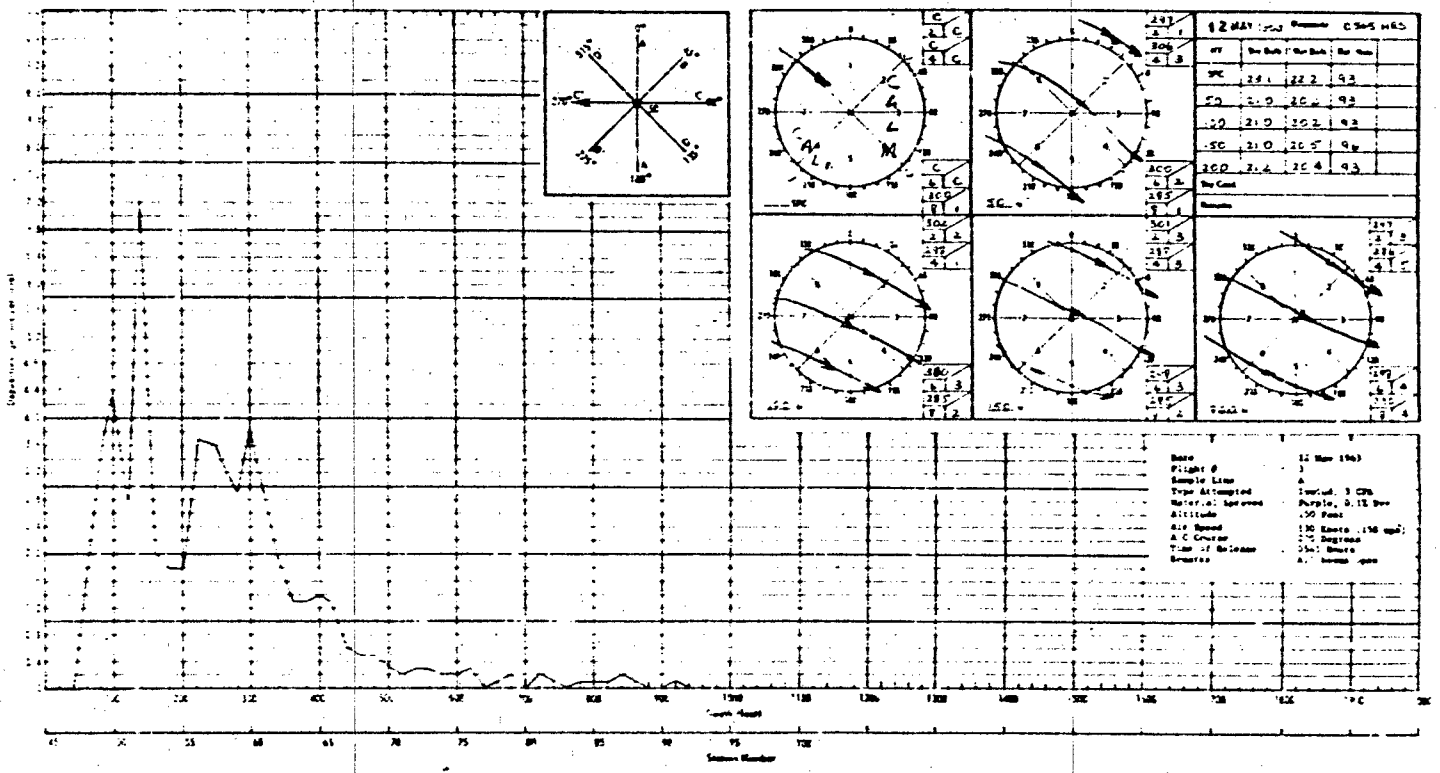
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 270 degrees

WIND VECTOR: 291° / 2.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank		47	0.0	72	0.3		
		48	2.3	73	0.3		
		49	3.6	74	0.2		
		50	4.3	75	0.2		
		51	2.8	76	0.3		
		52	7.3	77	0.0		
		53	2.0	78	0.1		
		54	1.8	79	0.2		
		55	1.8	80	0.0		
		56	3.7	81	0.2		
		57	3.6	82	0.1		
		58	3.2	83	0.0		
		59	2.9	84	0.1		
		60	3.8	85	0.1		
		61	2.9	86	0.1		
		62	2.0	87	0.2		
		63	1.3	88	0.1		
		64	1.3	89	0.0		
		65	1.4	90	0.0		
		66	1.3	91	0.1		
		67	0.6	92	0.0		
		68	0.5	93	0.0		
		69	0.5	94	0.0		
		70	0.3	95	0.0		
		71	0.2	Stations 96-100 blank			


Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Frame Number
Station Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 12 May 1963

FLIGHT #: 4

SAMPLE LINE: D

TIME OF RELEASE: 0611 Hours

DURATION: 15 Seconds

FLOW RATE: 422 GPM

SYSTEM: C-123/MC-1

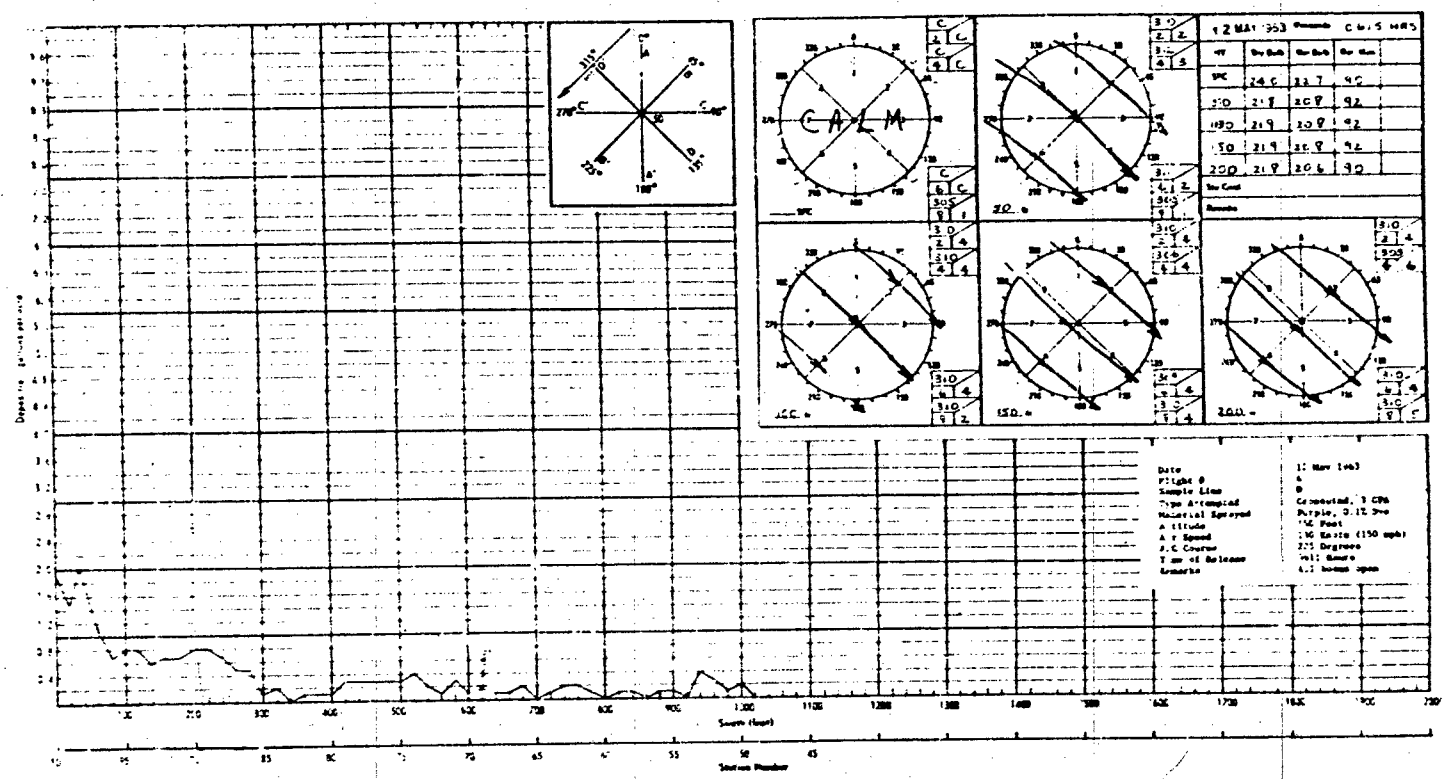
AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 225 Degrees

WIND VECTOR: 309°/2.9 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.0	26	0.0	51	0.1	76	0.3
2	0.0	27	0.0	52	0.3	77	0.3
3	0.0	28	0.0	53	0.4	78	0.3
4	0.0	29	0.0	54	0.0	79	0.3
5	0.0	30	0.0	55	0.1	80	0.1
6	0.0	31	0.0	56	0.1	81	0.1
7	0.0	32	0.0	57	0.0	82	0.1
8	0.0	33	0.0	58	0.1	83	0.0
9	0.0	34	0.0	59	0.1	84	0.2
10	0.0	35	0.0	60	0.0	84	0.1
11	0.0	36	0.0	61	0.1	86	0.5
12	0.0	37	0.0	62	0.2	87	0.5
13	0.0	38	0.0	63	0.2	88	0.7
14	0.0	39	0.0	64	0.1	89	0.8
15	0.0	40	0.0	65	0.0	90	0.8
16	0.0	41	0.0	66	0.2	91	0.7
17	0.0	42	0.0	67	0.1	92	0.7
18	0.0	43	0.0	68	0.1	93	0.6
19	0.0	44	0.0	69	Missing	94	0.8
20	0.0	45	0.0	70	0.1	95	0.8
21	0.0	46	0.0	71	0.3	96	0.7
22	0.0	47	0.0	72	0.1	97	1.1
23	0.0	48	0.0	73	0.2	98	2.0
24	0.0	49	0.0	74	0.4	99	1.5
25	0.0	50	0.2	75	0.3	100	1.9


CALM
Date
Flight #
Sample Line
Type Aircraft
Material Sprayed
Altitude
A/C Course
Time of Release
Remarks
Source (feet)
Source Number

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 12 May 1963

DATE TEST FLOWN: 13 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 81

NOZZLE TYPE: U5070

LIQUID TEMP: 33° C

DURATION OF SPRAY: 9.6 Sec.

PUMP PRESSURE: No. 1 89 psi before, 55 psi during; No. 2 91 psi before, 55 psi during

PUMP R.P.M. 3200 before spray

NO. OF PUMPS: 2

FLOW METER READING: 410-415 GPM

TOTAL AMOUNT SPRAYED: 61 Gals.

FLOW RATE CALIBRATED: 418 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-23, 28-43
TAIL: 1-4, 9-11, 16-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1		92	55	410
2		94.90	50	415
3		92	52	420

REMARKS: Temp. on 1st run 27° C, on return 30° C.

MASS MEDIAN DIAMETER

DATE: 13 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 1 PAPER: Kromekote, whit

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 418 GPM SYSTEM: C-123/MC-1

Sta.	Drop #	Size	Sta.	Drop#	Size
3	1	7500	4	10	5800
3	2	7400	4	11	5700
3	3	7300	4	12	5600
4	5	6500*			
4	4	6400			
4	7	6300			
4	8	6200			
4	6	6000			
4	9	5900			

$$\text{MMD} = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(6500)}{2.5} = 400.2 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7500) = 1143.7 Microns

Min. Sph. Dia. = 36 Microns

MASS MEDIAN DIAMETER

DATE: 13 May 1963

CONVERSION FACTOR: 2.5

FLIGHT #: 2

PAPER: Kromekote, white

SAMPLE LINE: C

MATERIAL: Purple

FLOW RATE: 418 GPM

SYSTEM: C-123/MC-1

Sta.	Drop#	Size	Sta.	Drop #	Size
11	2	7400	12	9	6'00
11	1	6900*	12	11	6000
12	3	6800			
12	4	6700			
12	6	6600			
12	5	6500			
12	7	6400			
12	8	6300			
12	10	6200			

$$MMD = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(6900)}{2.5} = 423.1 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7400) = 1129.4 Microns

Min. Sph. Dia. = 36 Microns

MASS MEDIAN DIAMETER

DATE: 13 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 3 PAPER: Kromekote, white

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 418 GPM SYSTEM: C-123/MC-1

Sta.	Drop #	Size	Sta.	Drop #	Size
10	4	7100*			
10	1	7000			
10	2	6900			
10	3	6800			
10	5	6700			
10	6	6600			
10	7	6500			
11	9	6400			
11	8	6300			
11	10	6100			

$$MMD = \frac{70.4410.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.4410.1431(7100)}{2.5} = 434.5 \text{ Microns}$$

Max. Sph. Dia. = 70.4410.1431 Max Spot = 70.4410.1431(7100) = 1036.4 Microns

Min. Sph. Dia. = 36 Microns

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 418 GPM

DATE: 13 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 Feet

TIME OF RELEASE: 0452 Hours

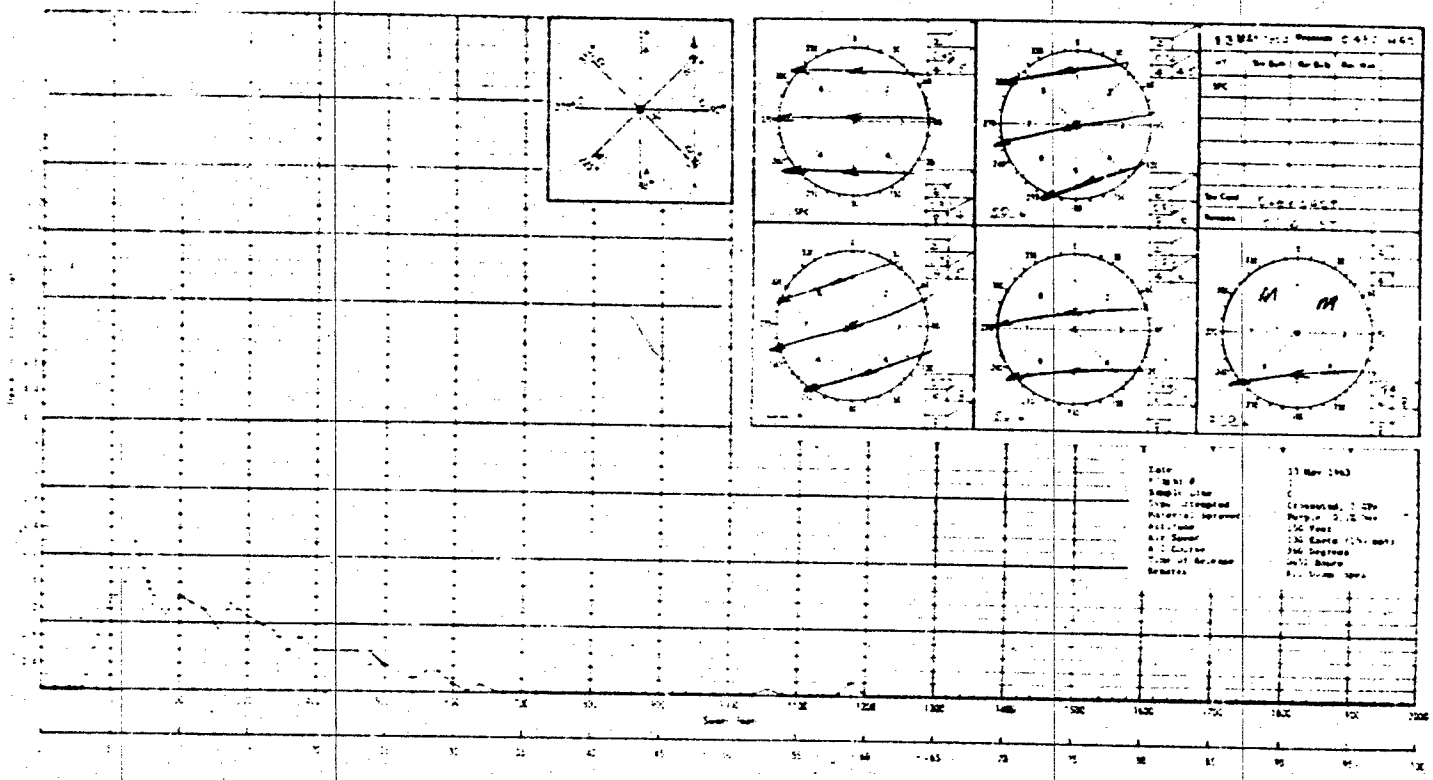
AIRCRAFT COURSE: 360 Degrees

DURATION: 13 Seconds

WIND VECTOR: 084°/6.4 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.0	26	0.3	51	0.0	76	0.0
2	0.0	27	0.2	52	0.0	77	0.0
3	0.0	28	0.3	53	0.1	78	0.0
4	0.6	29	0.3	54	0.0	79	0.0
5	1.3	30	0.1	55	0.0	80	0.0
6	1.5	31	0.0	56	0.0	81	0.0
7	2.2	32	0.1	57	0.0	82	0.0
8	1.5	33	0.0	58	0.0	83	0.0
9	1.1	34	0.0	59	0.2	84	0.0
10	1.4	35	0.0	60	0.0	85	0.0
11	1.3	36	0.0	61	0.0	86	0.0
12	1.2	37	0.0	62	0.0	87	0.0
13	0.9	38	0.0	63	0.0	88	0.0
14	1.3	39	0.0	64	0.0	89	0.0
15	1.1	40	0.0	65	0.0	90	0.0
16	1.0	41	0.0	66	0.0	91	0.0
17	0.9	42	0.0	67	0.0	92	0.0
18	0.6	43	0.0	68	0.0	93	0.0
19	0.6	44	0.0	69	0.0	94	0.0
20	0.6	45	0.0	70	0.0	95	0.0
21	0.6	46	0.0	71	0.0	96	0.0
22	0.6	47	0.0	72	0.0	97	0.0
23	0.6	48	0.0	73	0.0	98	0.0
24	0.6	49	0.0	74	0.0	99	0.0
25	0.4	50	0.0	74	0.0	100	0.0

Total 40.7



MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 418 GPM

DATE: 13 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 2

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 Feet

TIME OF RELEASE: 0515 Hours

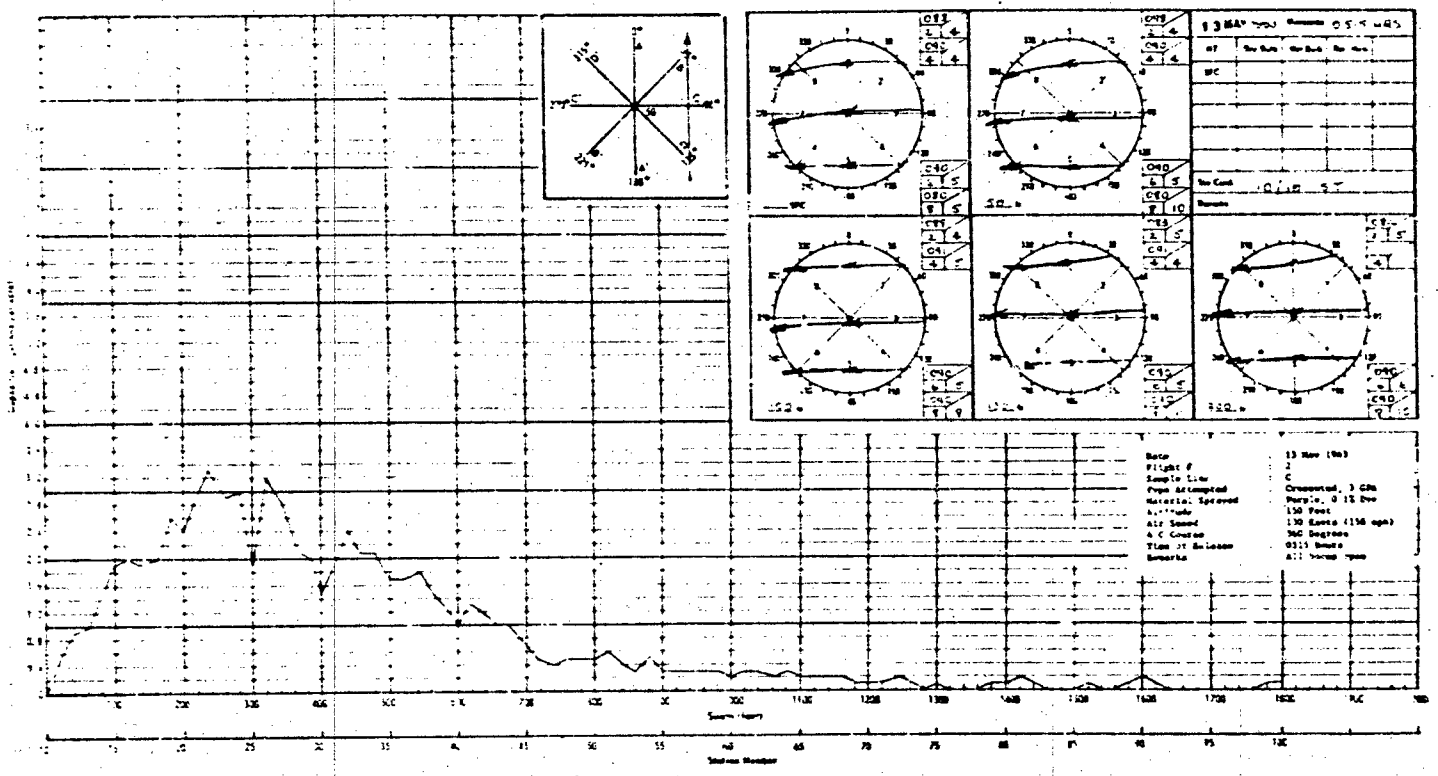
AIRCRAFT COURSE: 360 Degrees

DURATION: 14 Seconds

WIND VECTOR: 088°.5.8 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-10 Blank		26	3.2	51	0.6	76	0.0
		27	2.8	52	0.4	77	0.0
		28	2.1	53	0.3	78	0.0
		29	2.0	54	0.5	79	0.1
		30	1.5	55	0.4	80	0.1
		31	1.9	56	0.3	81	0.2
		32	2.4	57	0.3	82	0.1
		33	2.1	58	0.3	83	0.0
		34	2.1	59	0.3	84	0.0
		35	1.7	60	0.2	85	0.0
11	0.6	36	1.7	61	0.3	86	0.1
12	0.9	37	1.8	62	0.3	87	0.0
13	1.0	38	1.5	63	0.2	88	0.0
14	1.5	39	1.2	64	0.3	89	0.1
15	1.9	40	1.0	65	0.2	90	0.2
16	2.0	41	1.3	66	0.2	91	0.1
17	1.9	42	1.2	67	0.2	92	0.0
18	2.0	43	1.0	68	0.2	93	0.0
19	2.6	44	1.0	69	0.1	94	0.0
20	2.4	45	0.7	70	0.1	95	0.0
21	2.9	46	0.5	71	0.1	96	0.0
22	3.3	47	0.4	72	0.2	97	0.0
23	2.9	48	0.5	73	0.1	98	0.0
24	3.0	49	0.5	74	0.0	99	0.1
25	1.9	50	0.5	75	0.1	100	0.1

Total 74.9


Date
Flight #
Sample Line
Altitude
Air Speed
Time of Release
Remarks
Seconds (Hours)
Seconds Number

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 418 GPM

DATE: 13 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 3

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 Feet

TIME OF RELEASE: 0538 Hours

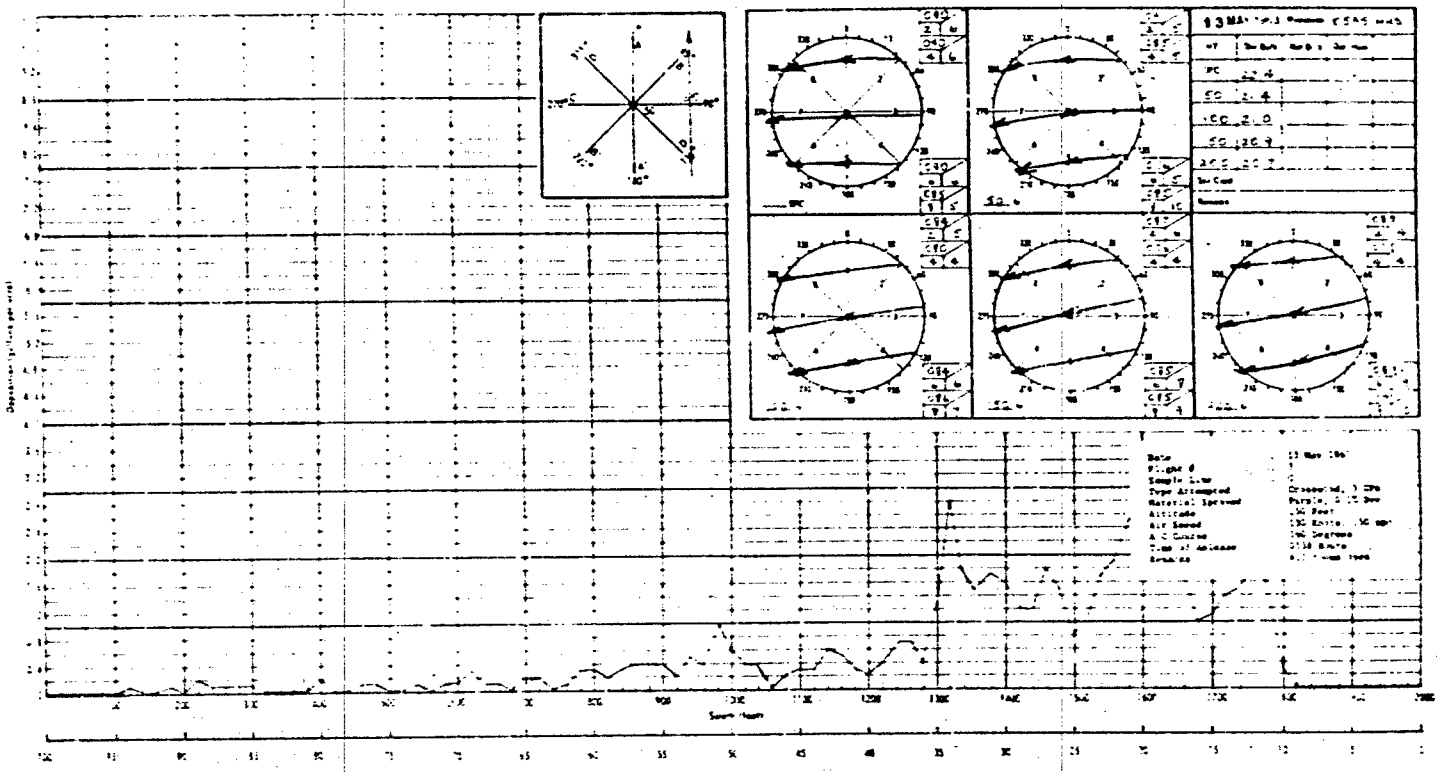
AIRCRAFT COURSE: 360 Degrees

DURATION: 15 Seconds

WIND VECTOR: 086°/6.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.0	26	1.5	51	1.0	76	0.1
2	0.0	27	1.8	52	0.4	77	0.1
3	0.0	28	1.2	53	0.5	78	0.0
4	0.0	29	1.2	54	0.2	79	0.0
5	0.0	30	1.6	55	0.4	80	0.2
6	0.0	31	1.7	56	0.4	81	0.0
7	0.0	32	1.5	57	0.4	82	0.0
8	0.0	33	1.8	58	0.3	83	0.0
9	0.0	34	2.8	59	0.2	84	0.0
10	0.3	35	1.3	60	0.3	85	0.1
11	1.6	36	0.4	61	0.3	86	0.1
12	1.8	37	0.7	62	0.1	87	0.1
13	1.5	38	0.7	63	0.0	88	0.1
14	1.4	39	0.4	64	0.2	89	0.2
15	1.1	40	0.2	65	0.2	90	0.0
16	1.0	41	0.3	66	0.0	91	0.1
17	1.7	42	0.5	67	0.1	92	0.0
18	2.5	43	0.6	68	0.1	93	0.0
19	3.0	44	0.3	69	0.3	94	0.1
20	2.8	45	0.2	70	0.1	95	0.0
21	2.5	26	0.2	71	0.1	96	0.0
22	1.9	47	0.0	72	0.0	97	0.0
23	1.7	48	0.4	73	0.1	98	0.0
24	1.1	49	0.4	74	0.0	99	0.0
25	0.8	50	0.6	75	0.0	100	0.0

Total 53.9



C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 13 May 1963

DATE TEST FLOWN: 14 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 81

NOZZLE TYPE: U5070

LIQUID TEMP: 33° C

DURATION OF SPRAY: 9.6 Sec

PUMP PRESSURE: No.1 89 psi before 55 psi during; No.2 91 psi before 55 psi during

PUMP R.P.M.: 3200 before spray

NO. OF PUMPS: 2

FLOW METER READING: 410-415 GPM

TOTAL AMOUNT SPRAYED:

FLOW RATE CALIBRATED: 418 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-23, 28-43
TAIL: 1-4, 9-11, 16-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3175 before 2600 during	90	52	400
2	3175 before 2600 during	90	52	375

REMARKS: No explanation for flowmeter reading on 2nd run.

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 418 GPM

DATE: 14 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 Feet

TIME OF RELEASE: 0603 Hours

AIRCRAFT COURSE: 090 Degrees

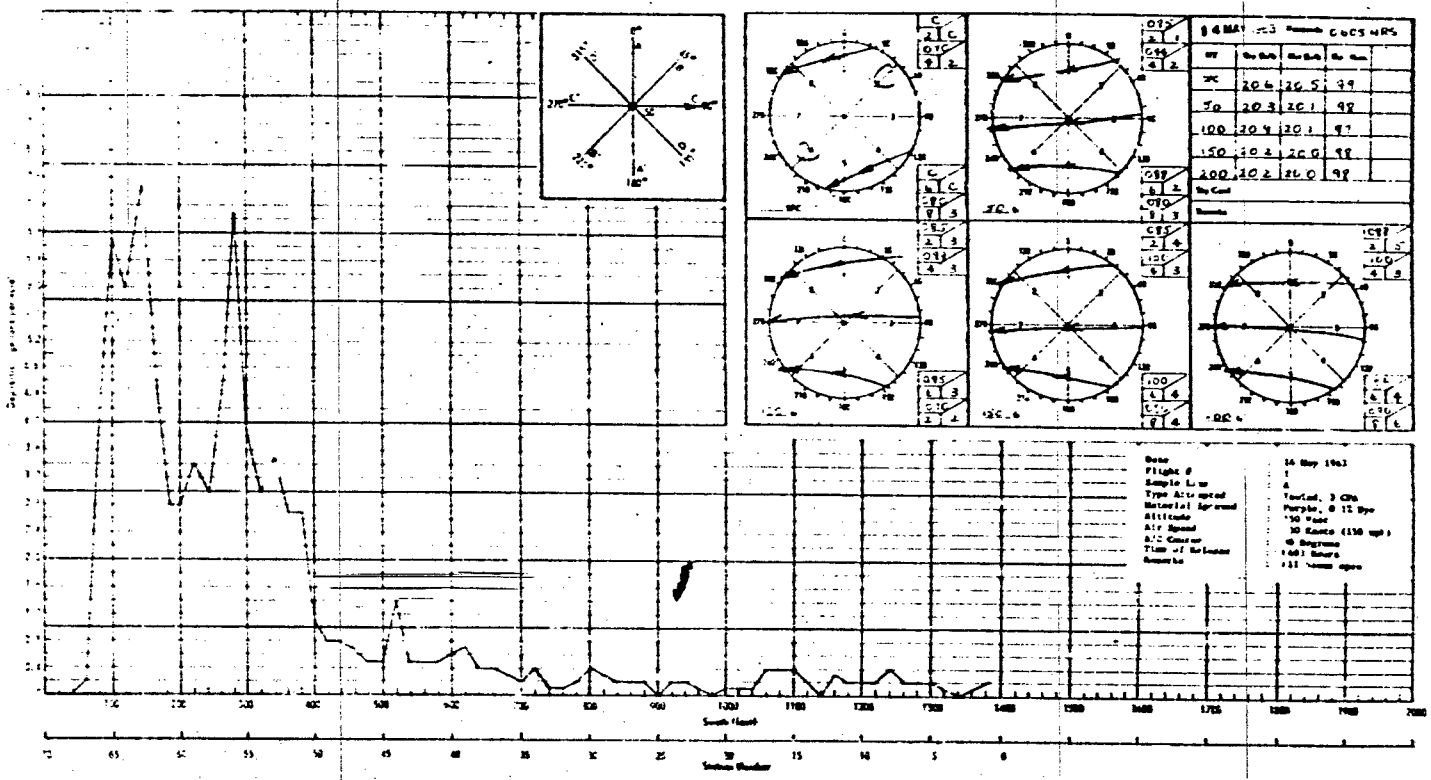
DURATION: 19 Seconds

WIND VECTOR: 091°/2.9 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.2	26	0.2	51	2.7		
2	0.1	27	0.2	52	2.7		
3	0.0	28	0.2	53	3.5		
4	0.1	29	0.3	54	3.0		
5	0.2	30	0.4	55	3.9		
6	0.2	31	0.2	56	7.1		
7	0.2	32	0.1	57	4.6		
8	0.4	33	0.1	58	3.0		
9	0.2	34	0.4	59	3.4		
10	0.2	35	0.2	60	2.8		
11	0.2	36	0.3	61	2.8		
12	0.3	37	0.4	62	4.5		
13	0.0	38	0.4	63	7.5		
14	0.2	39	0.7	64	6.0		
15	0.4	40	0.6	65	6.7		
16	0.4	41	0.5	66	3.9		
17	0.4	42	0.5	67	0.2		
18	0.1	43	0.5	68	Stations 63 thru Blank		
19	0.1	44	1.4				
20	0.1	45	0.5				
21	0.0	46	0.5				
22	0.1	47	0.7				
23	0.2	48	0.8				
24	0.2	49	0.8				
25	0.0	50	1.1				

$$\% \text{ Recovery} = \frac{0.202 \times 150 \times 84.8 \times 20}{418} = 122.0$$

Total = 84.8


Date
Flight #
Sample Line
Type Aircraft
Material Aground
Altitude
Air Speed
A/C Course
Time of Release
Remarks
16 May 1963
Seconds Elapsed
Seconds Remaining

MASS DEPOSIT

MATERIAL: Purple

DATE: 14 May 1963

FLIGHT: 2

SAMPLE LINE: A

TIME OF RELEASE: 0625 hours

DURATION: 17 seconds

FLOW RATE: 418 GPM

SYSTEM: C-123/MC-1

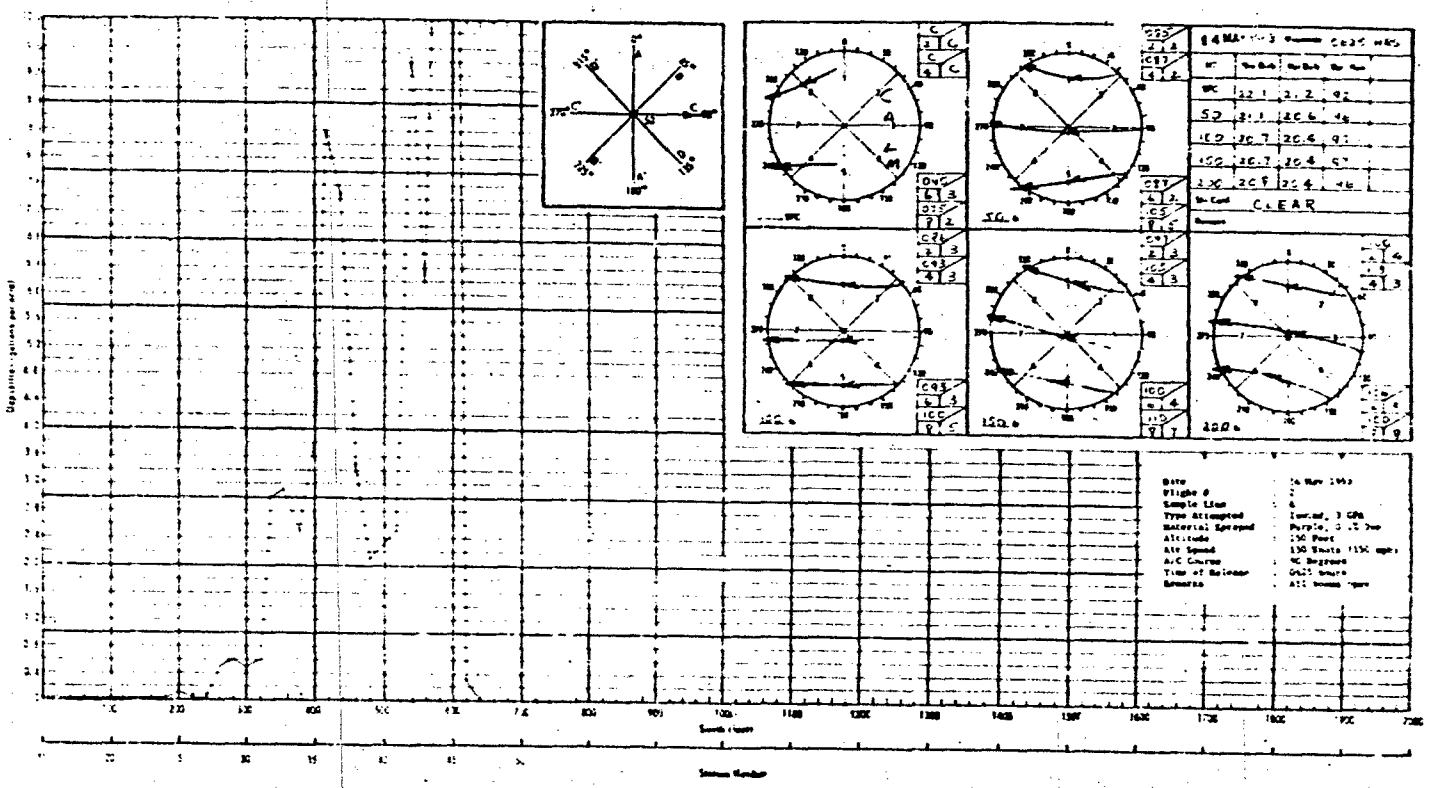
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 090 degrees

WIND VECTOR: 099° / 3.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-14 blank		15	0.0	40	2.3		
		16	0.0	41	2.5		
		17	0.0	42	9.5		
		18	0.0	43	6.2		
		19	0.0	44	11.6		
		20	0.0	45	11.4		
		21	0.0	46	0.3		
		22	0.0	47	0.0		
		23	0.0	Stations 48-100 blank			
		24	0.0				
		25	0.1				
		26	0.0				
		27	0.0				
		28	0.5				
		29	0.6				
		30	0.5				
		31	0.6				
		32	3.0				
		33	3.1				
		34	2.5				
		35	3.8				
		36	8.4				
		37	7.5				
		38	3.5				
		39	2.1				


CLEAR
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Alt Speed
A/C Course
Time of Release
Remarks

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 13 May 1963

DATE TEST FLOWN: 15 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 81

NOZZLE TYPE: U5070

LIQUID TEMP: 33° C

DURATION OF SPRAY: 9.6 Sec.

PUMP PRESSURE: No. 1 89 psi before 55 psi during

PUMP R.P.M.: 3200 before spray

: No. 2 91 psi before 55 psi during

NO. OF PUMPS: 2

FLOW METER READING: 410-415 GPM

TOTAL AMOUNT SPRAYED: 67 Gals.

FLOW RATE CALIBRATED: 418 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-23, 28-43
TAIL: 1-4, 9-11, 16-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1		90	56	390
2		90	55	350

REMARKS: Tail Boom not opened.

MASS DEPOSIT

MATERIAL: Purple

DATE: 15 May 1963

FLIGHT #: 1

SAMPLE LINE: A

TIME OF RELEASE: 0617 hours

DURATION: 14 seconds

FLOW RATE: 418 GPM

SYSTEM: C-123/MC-1

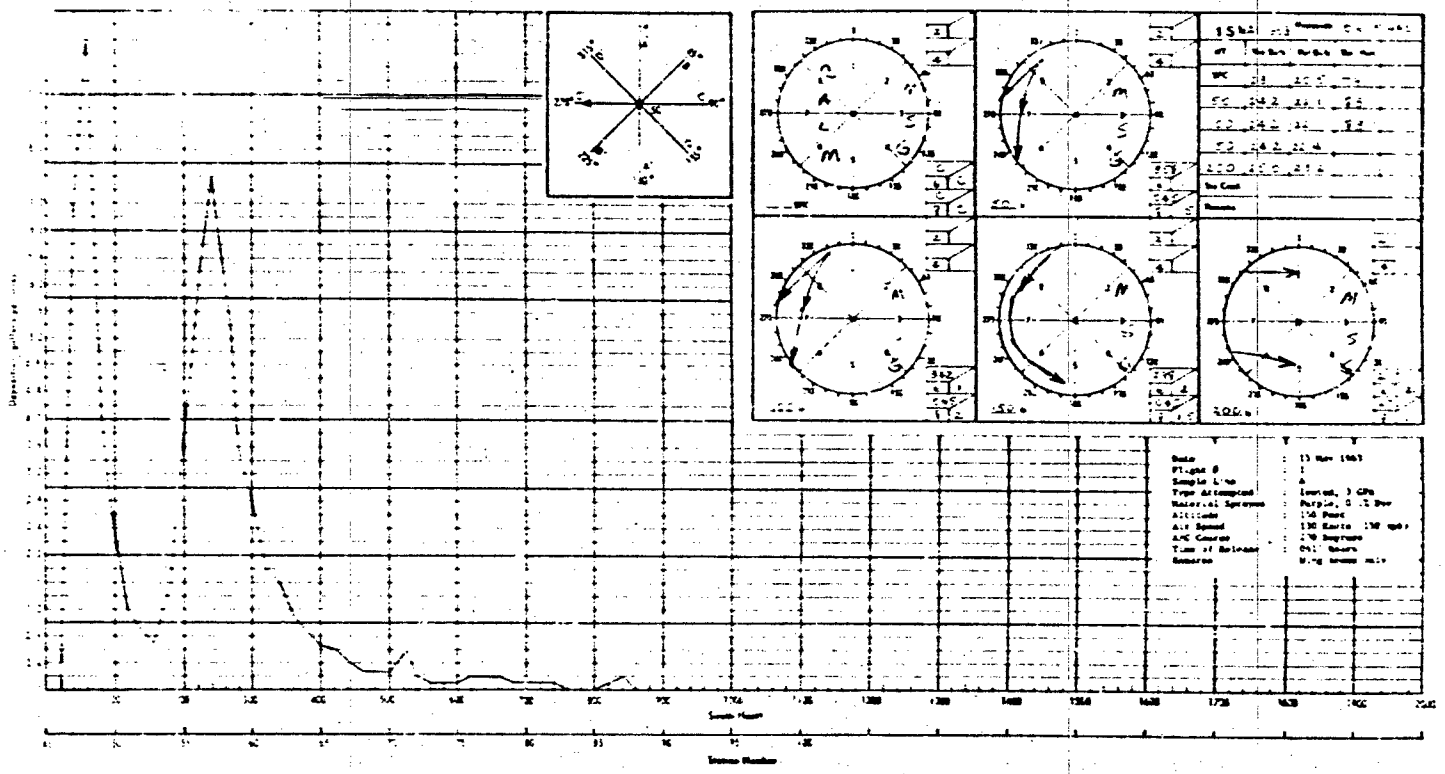
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 270 degrees

WIND VECTOR: 333° / 1.3 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank		47	7.2	72	0.2	97	0.0
		48	9.6	73	0.1	98	0.0
		49	4.0	74	0.1	99	0.0
		50	2.4	75	0.1	100	0.0
		51	1.2	76	0.2		
		52	0.9	77	0.2		
		53	0.7	78	0.2		
		54	1.6	79	0.1		
		55	3.8	80	0.1		
		56	6.2	81	0.1		
		57	7.6	82	0.1		
		58	5.3	83	0.0		
		59	3.6	84	0.0		
		60	2.8	85	0.0		
		61	1.8	86	0.1		
		62	1.6	87	0.2		
		63	1.1	88	0.0		
		64	0.9	89	0.0		
		65	0.7	90	0.0		
		66	0.6	91	0.0		
		67	0.4	92	0.0		
		68	0.3	93	0.0		
		69	0.3	94	0.0		
		70	0.3	95	0.0		
		71	0.6	96	0.0		



MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 418 GPM

DATE: 15 May 1963

SYSTEM C-123/MC-1

FLIGHT #: 2

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: D

ALTITUDE: 150 Feet

TIME OF RELEASE: 0643 Hours

AIRCRAFT COURSE: 045 Degrees

DURATION: 14 Seconds

WIND VECTOR: 301°/2.0

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.2	26	0.6	51	3.5		
2	0.3	27	0.6	Stations 52-100 Blank			
3	0.3	28	0.6				
4	0.2	29	0.6				
5	0.3	30	0.7				
6	0.2	31	0.8				
7	0.4	32	0.9				
8	0.7	33	1.1				
9	0.3	34	1.0				
10	0.3	35	1.5				
11	0.3	36	0.9				
12	0.2	37	1.2				
13	0.3	38	1.2				
14	0.3	39	2.2				
15	0.3	40	2.6				
16	0.3	41	4.0				
17	0.3	42	3.5				
18	0.3	43	3.1				
19	0.2	44	2.5				
20	0.3	45	1.6				
21	0.3	46	1.7				
22	0.3	47	1.9				
23	0.4	48	2.1				
24	0.4	49	5.2				
25	0.5	50	12.6*				

* Contaminated by dirt

Total 66.1

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 13 May 1963

DATE TEST FLOWN: 17 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 81

NOZZLE TYPE: 05070

LIQUID TEMP: 33° C

DURATION OF SPRAY: 9.6 Secs.

PUMP PRESSURE: No. 1 89 psi before, 55 psi during; No. 2 91 psi before, 55 psi during

PUMP R.P.M.: 3200 before spray

NO. OF PUMPS: 2

FLOW METER READING: 410-415 GPM

TOTAL AMOUNT SPRAYED: 67 Gals

FLOW RATE CALIBRATED: 418 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-23, 28-43
TAIL: 1-4, 9-11, 16-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3175 before 2600 during	90	54	400
2	3175 before 2600 during	90	54	400
3	3175 before	90	54	400
4	2600 during	90	54	400

REMARKS:

MASS MEDIAN DIAMETER

DATE: 17 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 4 PAPER: Kromekote, white

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 418 GPM SYSTEM: C-123/MC-1

Sta.	Drop #	Size	Sta.	Drop #	Size
96	1	6800*			
96	2	6700			
96	3	6600			
96	4	6500			
96	6	6400			
96	9	6200			
96	8	6100			
96	7	6000			
96	5	5900			
96	10	5800			

MMD = $\frac{70.4+0.1431 \text{ Spot D Max}}{\text{Con. Factor}}$ = $\frac{70.4+0.1431(6800)}{2.5}$ = 417.4 Microns

Max. Sph. Dia. = 70.4+0.1431 Max Spot = 70.4+0.1431(6800) = 1043.5 Microns

Min. Sph. Dia. = 36.0 Microns

MASS DEPOSIT

MATERIAL: Purple

DATE: 17 May 1963

FLIGHT #: 1

SAMPLE LINE: A

TIME OF RELEASE: 0459 hours

DURATION: 17 seconds

FLOW RATE: 418 GPM

SYSTEM: C-123/MC-1

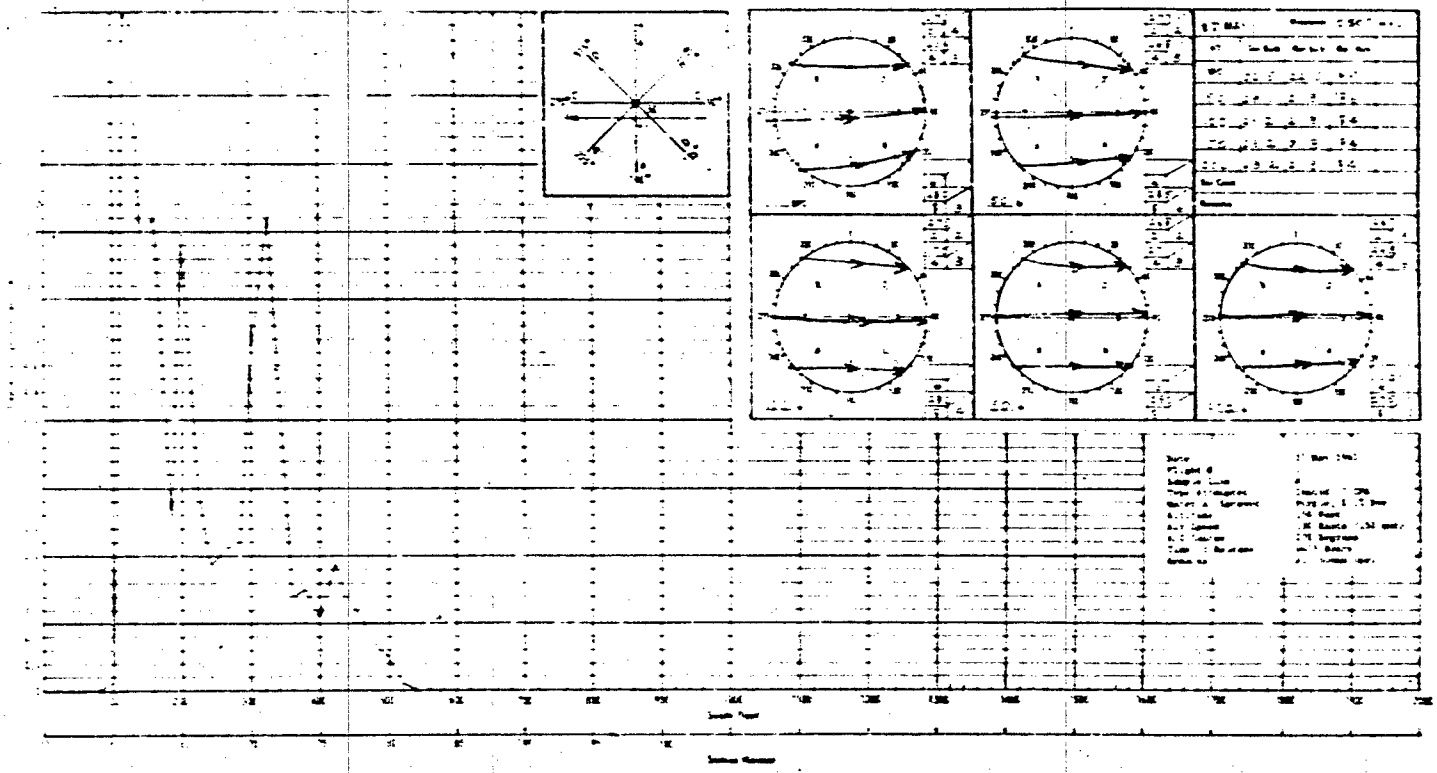
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 270 degrees

WIND VECTOR: 274° / 4.6 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-59 blank				60	0.1		
				61	10.9		
				62	6.8		
				63	7.0		
				64	2.6		
				65	6.8		
				66	3.0		
				67	1.9		
				68	2.1		
				69	2.2		
				70	5.0		
				71	7.0		
				72	5.0		
				73	1.4		
				74	1.5		
				75	1.1		
				76	1.9		
				77	1.4		
				78	1.1		
				79	0.7		
				80	0.5		
				81	0.1		
				Stations 82-100 blank			



62

MASS DEPOSIT

MATERIAL: Purple

DATE: 17 May 1961

FLIGHT #: 2

SAMPLE LINE: A

TIME OF RELEASE: 0521 hours

DURATION: 18 seconds

FLOW RATE: 418 GPM

SYSTEM: C-123/MC-1

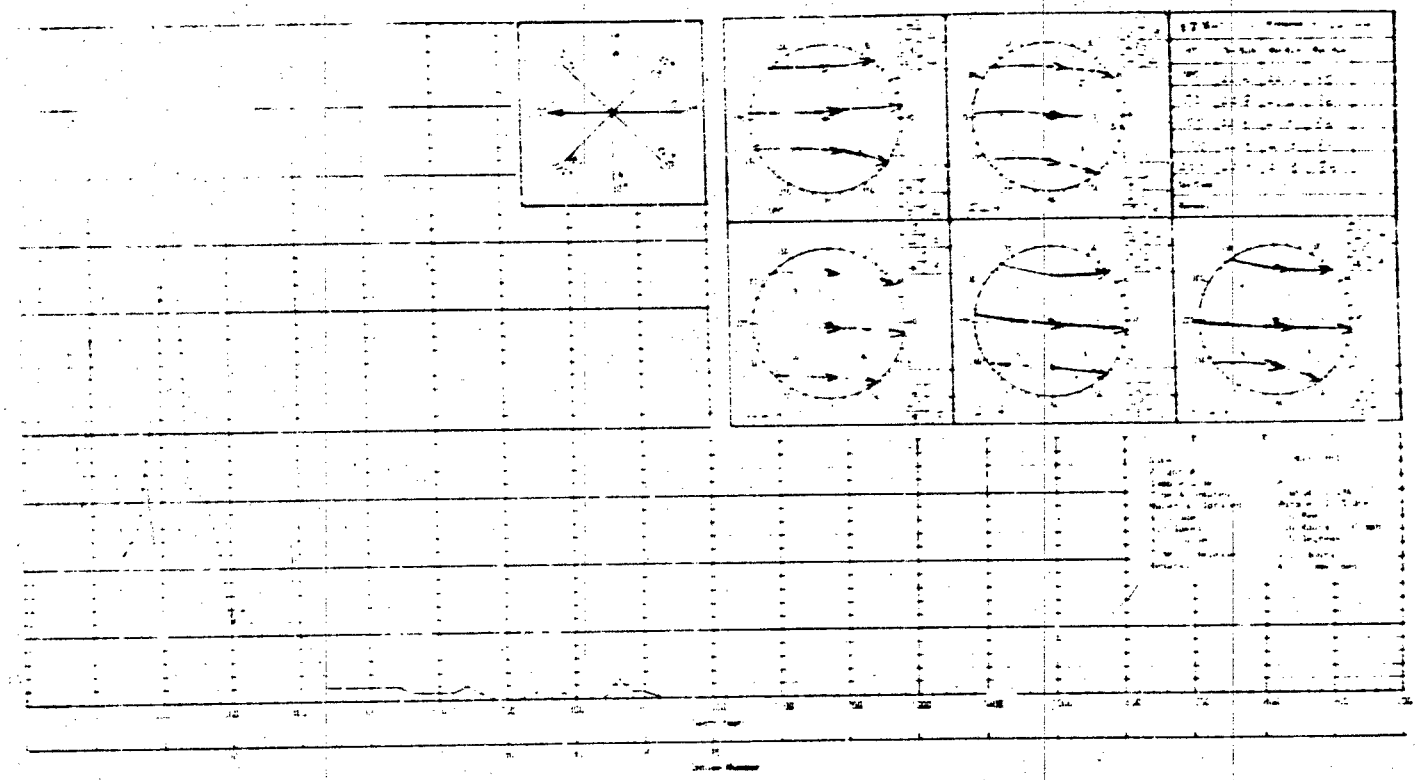
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 270 degrees

WIND VECTOR: 276° / 4.4 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-45 blank		46	3.0	71	0.2		
		47	10.4	72	0.2		
		48	5.5	73	0.1		
		49	2.8	74	0.1		
		50	6.0	75	0.1		
		51	4.8	76	0.1		
		52	2.2	77	0.2		
		53	2.6	78	0.1		
		54	4.1	79	blank		
		55	5.8	80	blank		
		56	7.8	81	blank		
		57	3.2	82	0.1		
		58	3.0	83	blank		
		59	2.3	84	0.1		
		60	1.2	85	blank		
		61	1.4	86	blank		
		62	1.0	87	blank		
		63	1.0	88	0.1		
		64	1.2	89	0.1		
		65	1.0	90	0.1		
		66	0.2	Stations 91-100 blank			
		67	0.2				
		68	0.2				
		69	0.2				
		70	0.2				



MASS DEPOSIT

MATERIAL: Purple

DATE: 17 May 1963

FLIGHT #: 3

SAMPLE LINE: A

TIME OF RELEASE: 0540 hours

DURATION: 16 seconds

FLOW RATE: 418 GPM

SYSTEM: C-123/MC-1

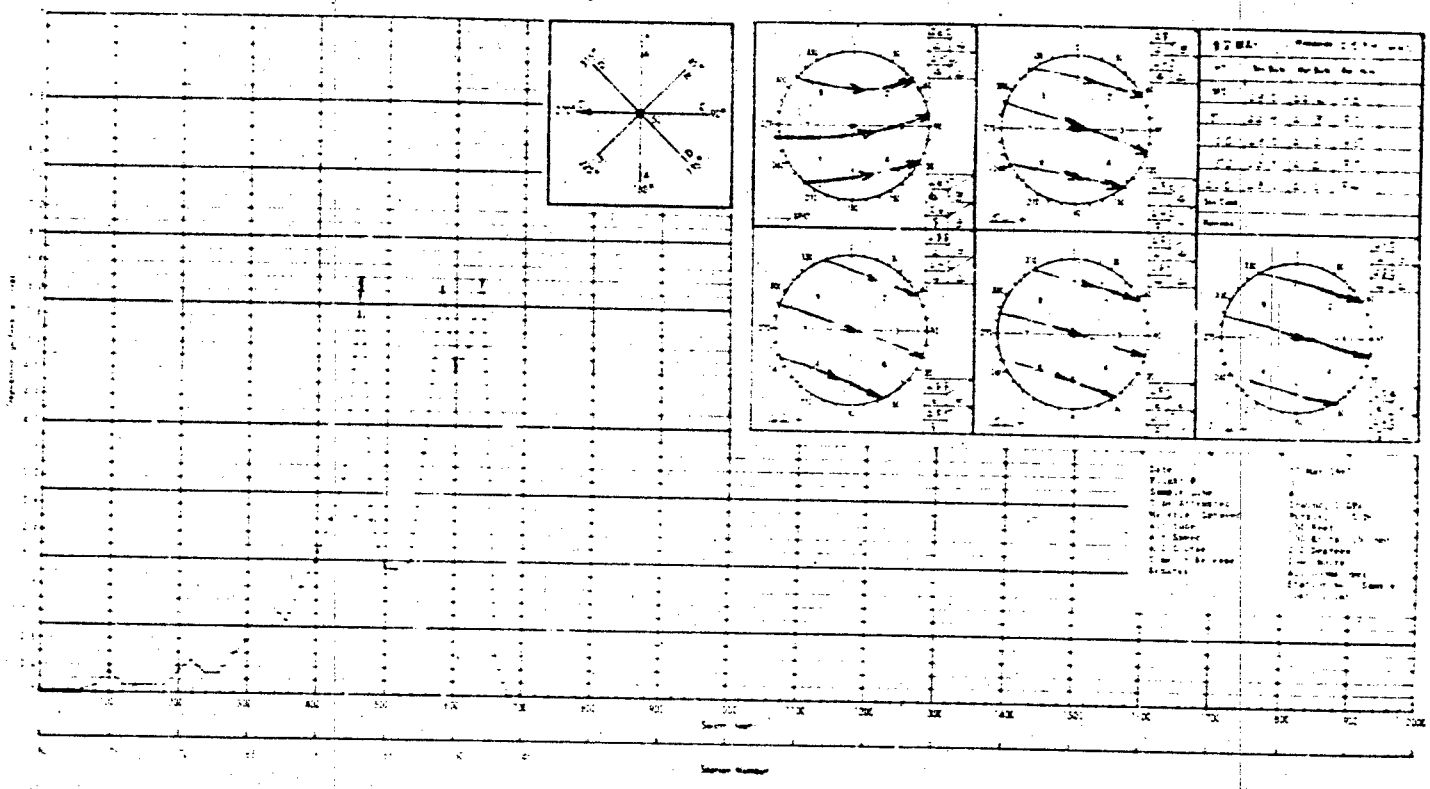
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 270 degrees

WIND VECTOR: 284° / 4.7 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank				47	0.6	72	0.1
				48	6.2	73	0.1
				49	5.2	74	0.1
				50	4.8	75	0.3
				51	6.3	76	0.1
				52	3.6	Stations 77-100 blank	
				53	2.0		
				54	1.9		
				55	1.9		
				56	2.6		
				57	6.2		
				58	3.2		
				59	2.6		
				60	2.0		
				61	1.6		
				62	1.1		
				63	1.3		
				64	Blank		
				65	0.8		
				66	0.6		
				67	0.3		
				68	0.1		
				69	0.5		
				70	0.3		
				71	0.1		



MASS DEPOSIT

MATERIAL: Purple

DATE: 17 May 1963

FLIGHT #. 4

SAMPLE LINE. C

TIME OF RELEASE. 0557 hours

DURATION: 15 seconds

FLOW RATE: 418 GPM

SYSTEM. C-123/MC-1

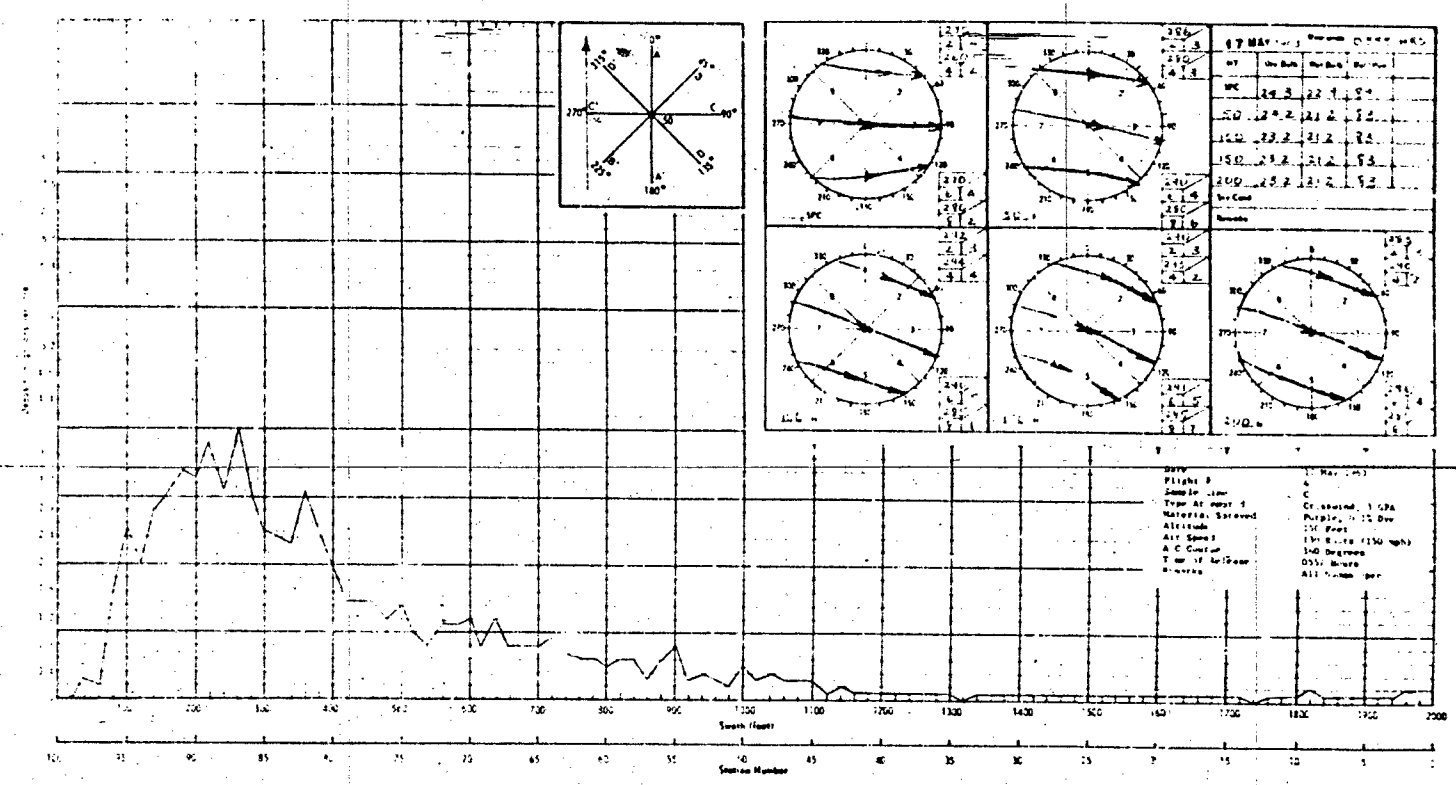
AIRSPEED. 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 360 degrees

WIND VECTOR: 282° / 3.9 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.2	26	0.1	51	0.2	76	1.2
2	0.2	27	0.1	52	0.3	77	1.5
3	0.1	28	0.1	53	0.4	78	1.5
4	0.1	29	0.1	54	0.3	79	1.5
5	0.1	30	0.1	55	0.8	80	2.0
6	0.1	31	0.1	56	0.6	81	2.5
7	0.1	32	0.1	57	0.3	82	3.1
8	0.1	33	0.1	58	0.6	83	2.3
9	0.2	34	0.0	59	0.6	84	2.4
10	0.1	35	0.1	60	0.5	85	2.5
11	0.1	36	0.1	61	0.6	86	3.0
12	0.1	37	0.1	62	0.6	87	4.0
13	0.0	38	0.1	63	0.7	88	3.1
14	0.1	39	0.1	64	0.9	89	3.8
15	0.1	40	0.1	65	0.8	90	3.3
16	0.1	41	0.1	66	0.8	91	3.4
17	0.1	42	0.1	67	0.6	92	3.0
18	0.1	43	0.2	68	1.2	93	2.8
19	0.1	44	0.1	69	0.8	94	2.0
20	0.1	45	0.3	70	1.2	95	2.5
21	0.1	46	0.3	71	1.1	96	1.6
22	0.1	47	0.3	72	1.1	97	0.2
23	0.1	48	0.4	73	0.8	98	0.3
24	0.1	49	0.3	74	1.0	99	Blank
25	0.1	50	0.5	75	1.4	100	Blank


Smooth Rotor
Station Number

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 14 May 1963

DATE TEST FLOWN: 18 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 80

NOZZLE TYPE: U5070

LIQUID TEMP: 29.5° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: No. 1 90 psi before, 58 psi during

PUMP R.P.M.: 3200 before spray

: No. 2 90 psi before, 58 psi during

NO. OF PUMPS: 2

FLOW METER READING: 420 GPM

TOTAL AMOUNT SPRAYED: 102.5 Gals

FLOW METER CALIBRATED: 410 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-23, 28-45
TAIL: 1-4, 9-11, 16-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3200	90	58	300-350
2	3200	90	58	300-350

REMARKS: Teflon diaphragm used in check valves became loose and worked down into nozzle openings causing plugging.

MASS MEDIAN DIAMETER

DATE: 18 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 1 PAPER: Kromekote, white

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 410 GPM SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
91	4	7400*			
93	2	7300			
93	1	7200			
93	3	7100			
89	9	6900			
91	5	6800			
91	6	6600			
90	7	6500			
90	8	6400			
92	10	6300			

$$\text{MMD} = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(7400)}{2.5} = 451.7 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7400) = 1129.4 Microns

Min. Sph. Dia. = 36 Microns

MASS MEDIAN DIAMETER

DATE: 18 May 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 2 PAPER: Kromekote, white

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 410 GPM SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
92	1	7000*			
92	2	6900			
90	4	6800			
92	3	6600			
92	11	6500			
91	5	6300			
91	6	6200			
91	7	6100			
91	8	6000			
91	10	5900			
91	9	5700			

$$MMD = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(7000)}{2.5} = 428.8 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7000) = 1072.1 Microns

Min. Sph. Dia. = 36 Microns

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 410 GPM

DATE: 18 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 Feet

TIME OF RELEASE: 0445 Hours

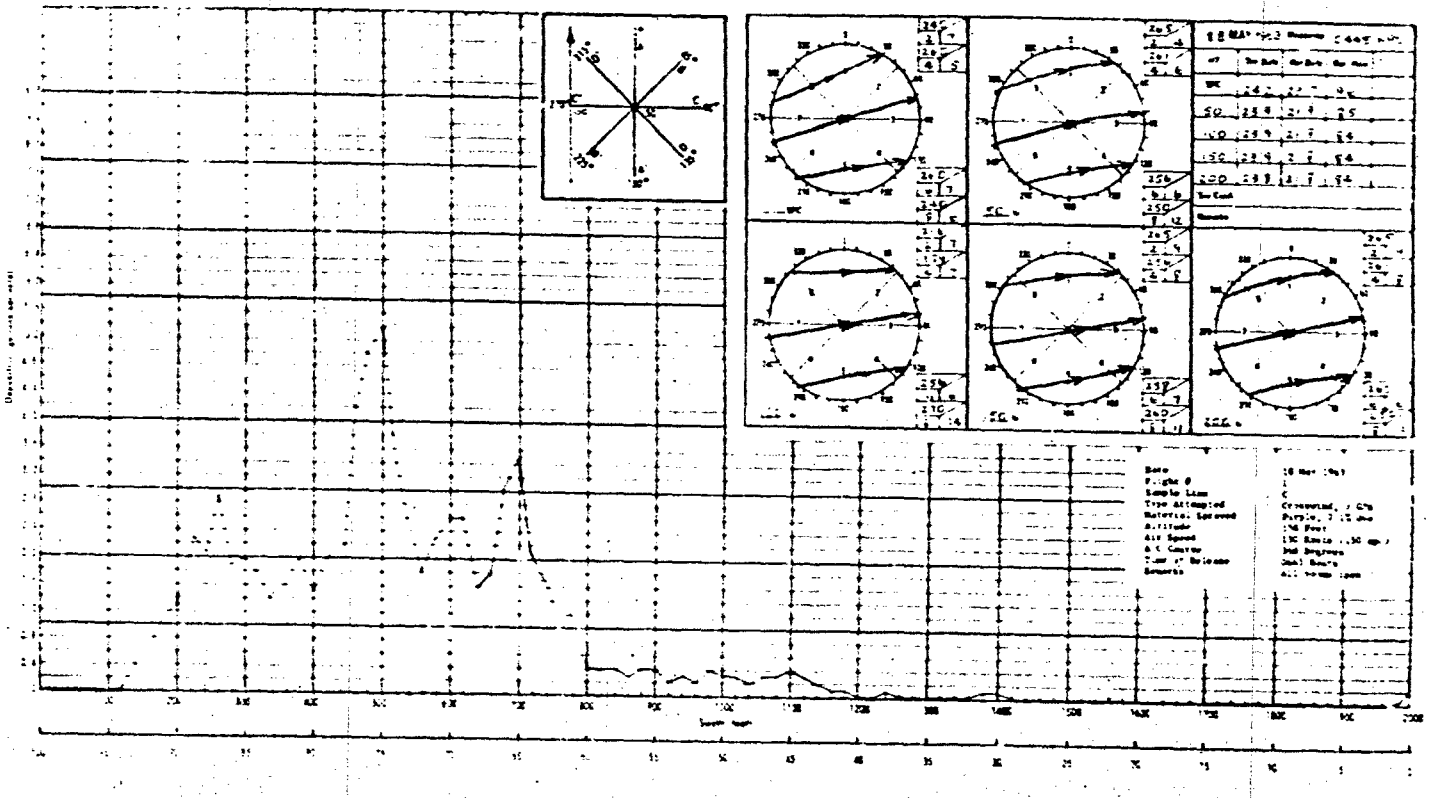
AIRCRAFT COURSE: 360 Degrees

DURATION: 24 Seconds

WIND VECTOR: 258°/7.9 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.2	26	0.0	51	0.4	76	5.0
2	0.0	27	0.0	52	0.2	77	4.2
3	0.0	28	0.0	53	0.3	78	2.2
4	0.0	29	0.0	54	0.2	79	2.0
5	0.0	30	0.1	55	0.4	80	1.5
6	0.0	31	0.1	56	0.4	81	2.0
7	0.0	32	0.0	57	0.3	82	1.6
8	0.0	33	0.0	58	0.4	83	1.4
9	0.0	34	0.0	59	0.4	84	1.8
10	0.0	35	0.0	60	0.4	85	2.0
11	0.0	36	0.0	61	1.2	86	1.9
12	0.0	37	0.0	62	1.1	87	2.9
13	0.0	38	0.1	63	1.7	88	2.1
14	0.0	39	0.0	64	2.1	89	2.3
15	0.0	40	0.0	65	3.5	90	1.3
16	0.0	41	0.1	66	3.0	91	1.1
17	0.0	42	0.1	67	1.9	92	0.7
18	0.0	43	0.2	68	1.6	93	0.4
19	0.0	44	0.3	69	2.6	94	0.0
20	0.0	45	0.4	70	2.6	95	0.0
21	0.0	46	0.3	71	2.3	96	0.0
22	0.0	47	0.3	72	1.8	97	0.0
23	0.0	48	0.2	73	2.6	98	0.0
24	0.0	49	0.3	74	3.5	99	0.0
25	0.0	50	0.3	75	5.4	100	0.0

Total 49.7



MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 410 GPM

DATE: 18 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 2.

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 Feet

TIME OF RELEASE: 0505 Hours

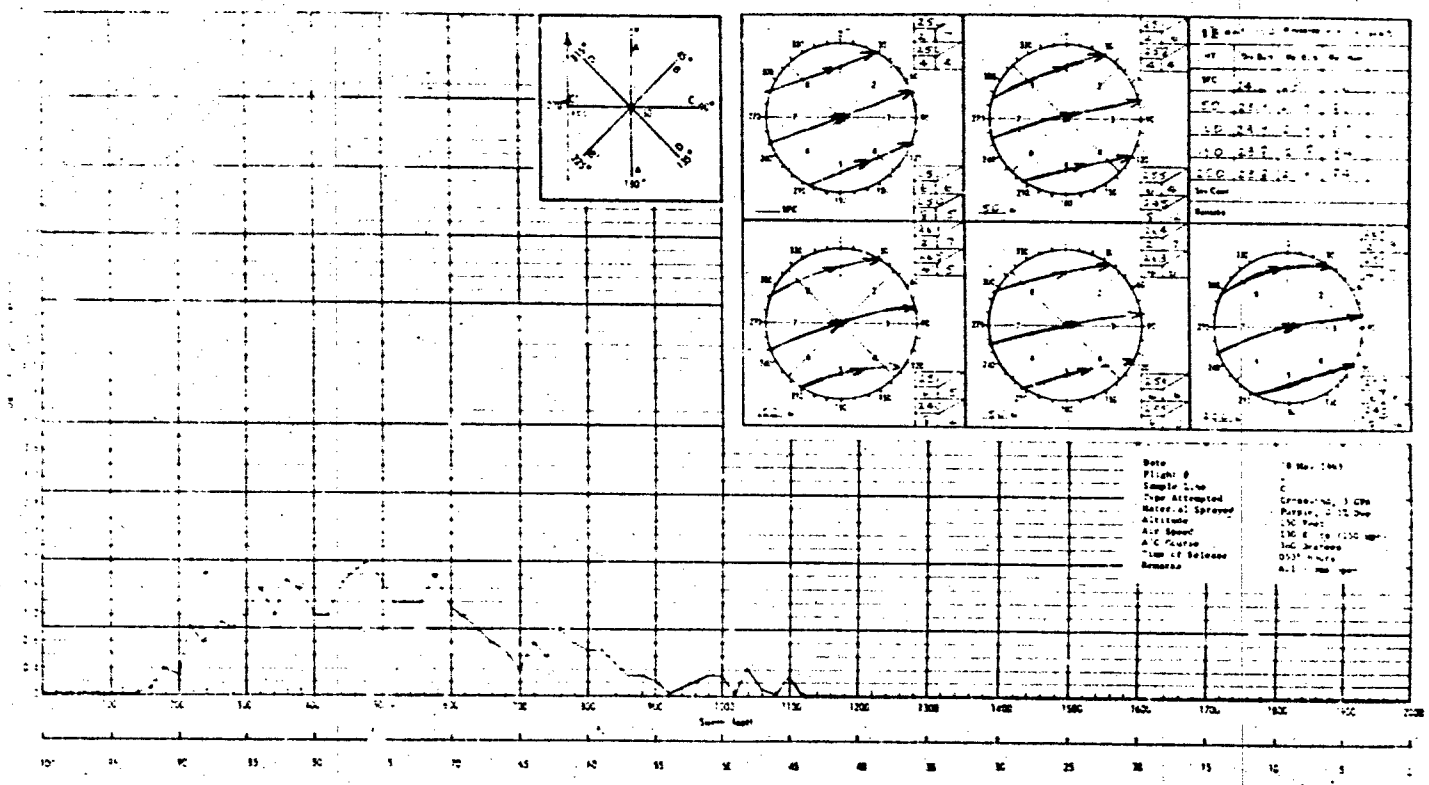
AIRCRAFT COURSE: 360 Degrees

DURATION: 17 Seconds

WIND VECTOR: 255°/7.1 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.0	26	0.0	51	0.3	76	2.0
2	0.0	27	0.0	52	0.2	77	1.9
3	0.0	28	0.0	53	0.1	78	1.7
4	0.0	29	0.0	54	0.0	79	1.2
5	0.0	30	0.0	55	0.2	80	1.2
6	0.0	31	0.0	56	0.3	81	1.6
7	0.0	32	0.0	57	0.3	82	1.7
8	0.0	33	0.0	58	0.5	83	1.2
9	0.0	34	0.0	59	0.7	84	1.6
10	0.0	35	0.0	60	0.7	85	1.2
11	0.0	36	0.0	61	0.8	86	1.0
12	0.0	37	0.0	62	1.0	87	1.1
13	0.0	38	0.0	63	0.6	88	0.8
14	0.0	39	0.0	64	0.8	89	1.0
15	0.0	40	0.0	65	1.4	90	0.3
16	0.0	41	0.0	66	0.7	91	0.4
17	0.0	42	0.0	67	0.8	92	0.1
18	0.0	43	0.0	68	1.0	93	0.0
19	0.0	44	0.0	69	1.2	94	0.0
20	0.0	45	0.3	70	1.3	95	0.0
21	0.0	46	0.0	71	1.8	96	0.0
22	0.0	47	0.1	72	1.4	97	0.0
23	0.0	48	0.4	73	1.4	98	0.0
24	0.0	49	0.0	74	1.4	99	0.0
25	0.0	50	0.3	75	1.7	100	0.0

Total 41.7


Date
Flight #
Sample Size
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 18 May 1963

DATE TEST FLOWN: 19 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 123

NOZZLE TYPE: U5070

LIQUID TEMP 30° C

DURATION OF SPRAY: 15 Sec

PUMP PRESSURE: No. 1 74 psi before, 36 psi during; No. 2 72 psi before, 36 psi during

PUMP R.P.M.: 2800 before spray

NO. OF PUMPS: 2

FLOW METER READING: 430 GPM

TOTAL AMOUNT SPRAYED: 106 Gals

FLOW RATE CALIBRATED: 424 GPM

NOZZLE CONFIGURATION: WING: 1-52
TAIL: 1-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	2800	74	36	---
2	2800	74	36	360
3	2800	74	36	320
4	2800	74	36	280
5	2800	74	36	290

REMARKS: Teflon diaphragm inserts again plugged nozzles.

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 424 GPM

DATE: 19 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: D

ALTITUDE: 150 feet

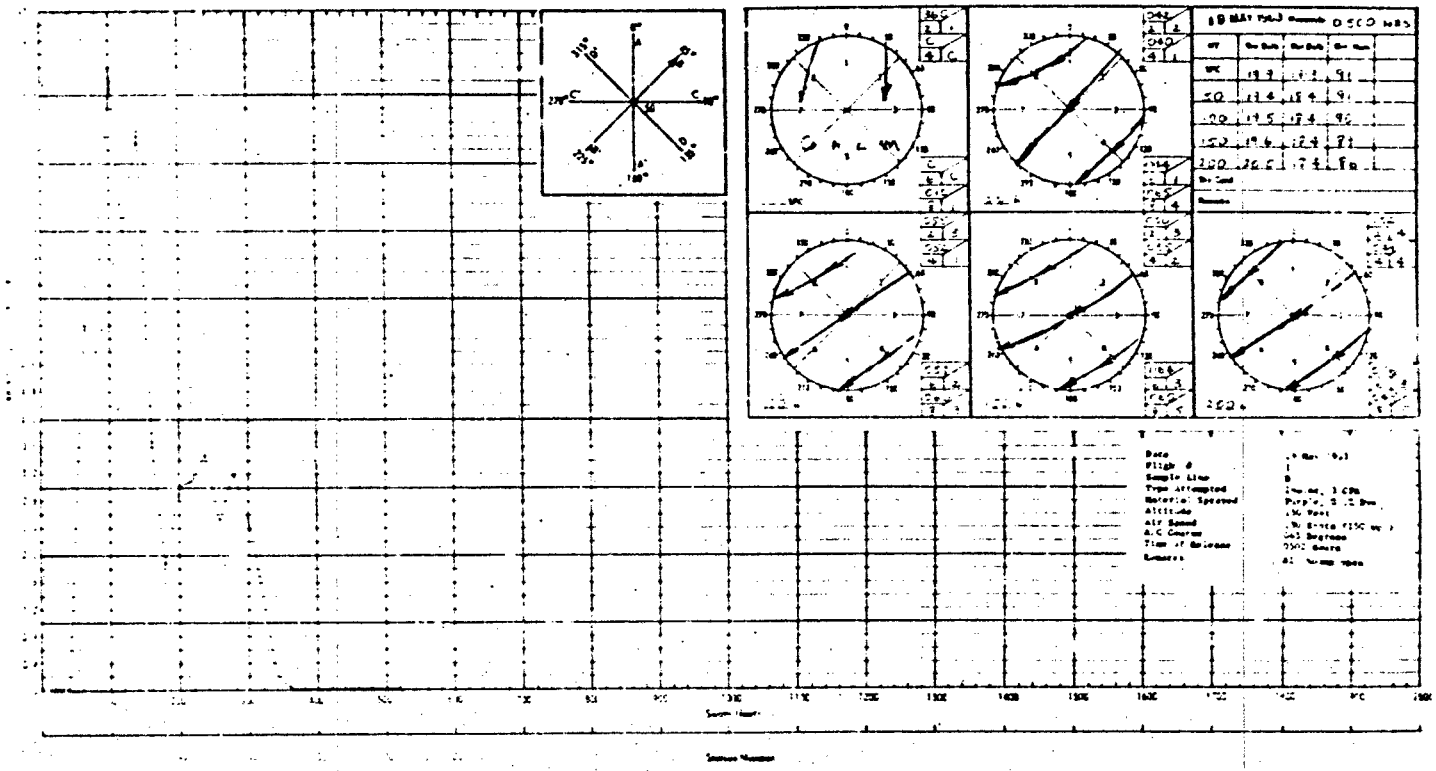
TIME OF RELEASE: 0502 hours

AIRCRAFT COURSE: 045 degrees

DURATION: 15 seconds

WIND VECTOR: 051° / 2.4 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-28 blank		29	0.0	54	0.0		
		30	0.0	55	0.0		
		31	0.0	Stations 56-100 blank			
		32	0.0				
		33	0.0				
		34	0.0				
		35	0.0				
		36	0.0				
		37	0.0				
		38	0.2				
		39	1.7				
		40	2.5				
		41	3.2				
		42	2.7				
		43	3.5				
		44	3.1				
		45	3.0				
		46	1.8				
		47	1.8				
		48	3.7				
		49	8.3				
		50	6.8				
		51	9.2				
		52	4.7				
		53	5.4				



MASS DEPOSIT

MATERIAL: Purple

DATE: 19 May 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0524 hours

DURATION: 14 seconds

FLOW RATE: 360 GPM

SYSTEM: C-123/MC-1

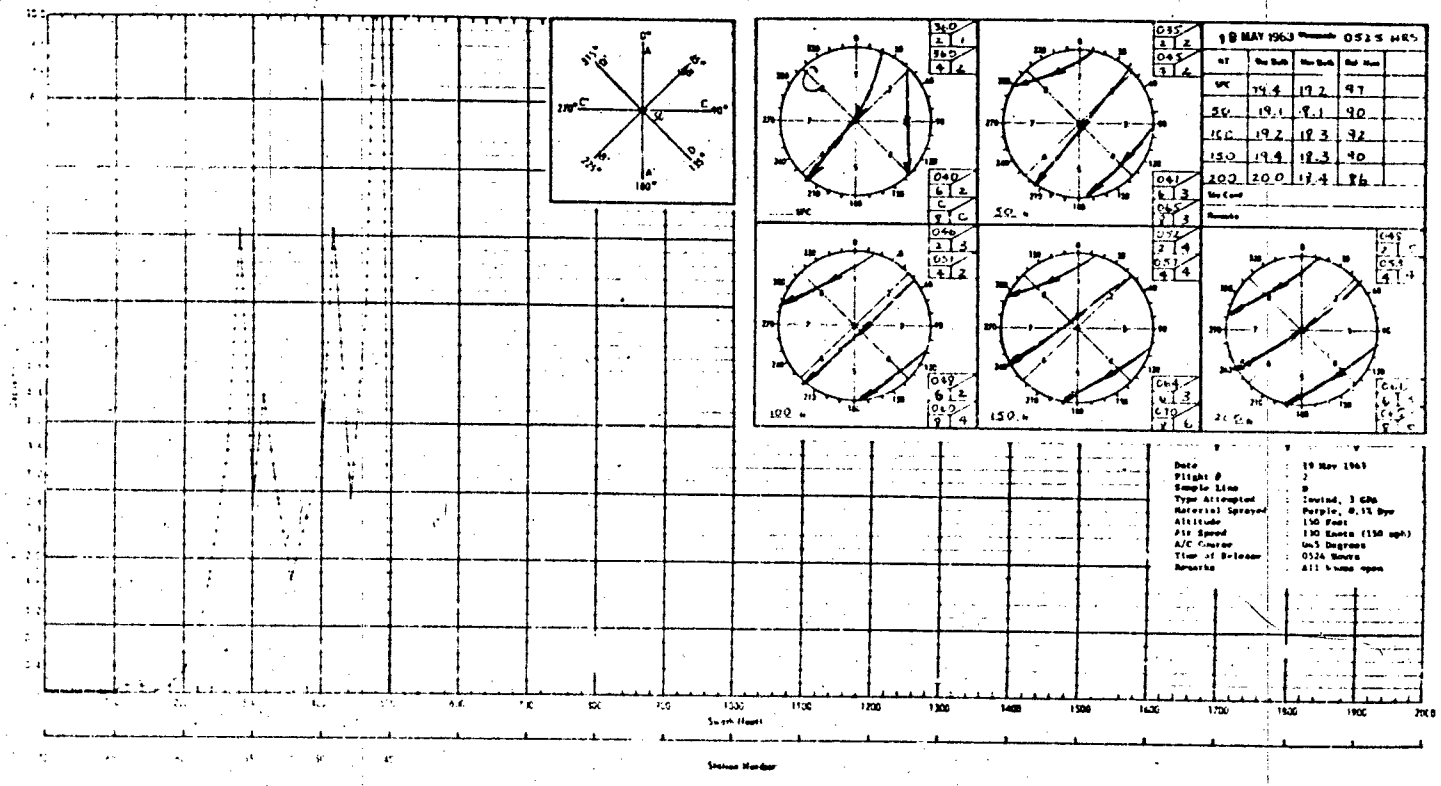
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 049° / 3.0 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-45 blank				46	12.3	Stations 71-100 blank	
				47	5.8		
				48	2.9		
				49	6.9		
				50	3.5		
				51	2.6		
				52	1.7		
				53	2.9		
				54	4.4		
				55	2.9		
				56	6.9		
				57	3.6		
				58	1.7		
				59	0.7		
				60	0.3		
				61	0.1		
				62	0.0		
				63	0.1		
				64	0.1		
				65	0.0		
				66	0.0		
				67	0.0		
				68	0.0		
				69	0.0		
				70	0.0		


19 MAY 1963
0525 HRS
Date : 19 May 1963
Flight # : 2
Sample Line : 8
Type Attempted : Inwind, 3 GPA
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 045 Degrees
Time of Release : 0524 Hours
Remarks : All hatch open
Sample Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 19 May 1963

FLIGHT #: 3

SAMPLE LINE A

TIME OF RELEASE: 0545 hours

DURATION: 13 seconds

FLOW RATE: 320 GPM

SYSTEM: C-123/MC-1

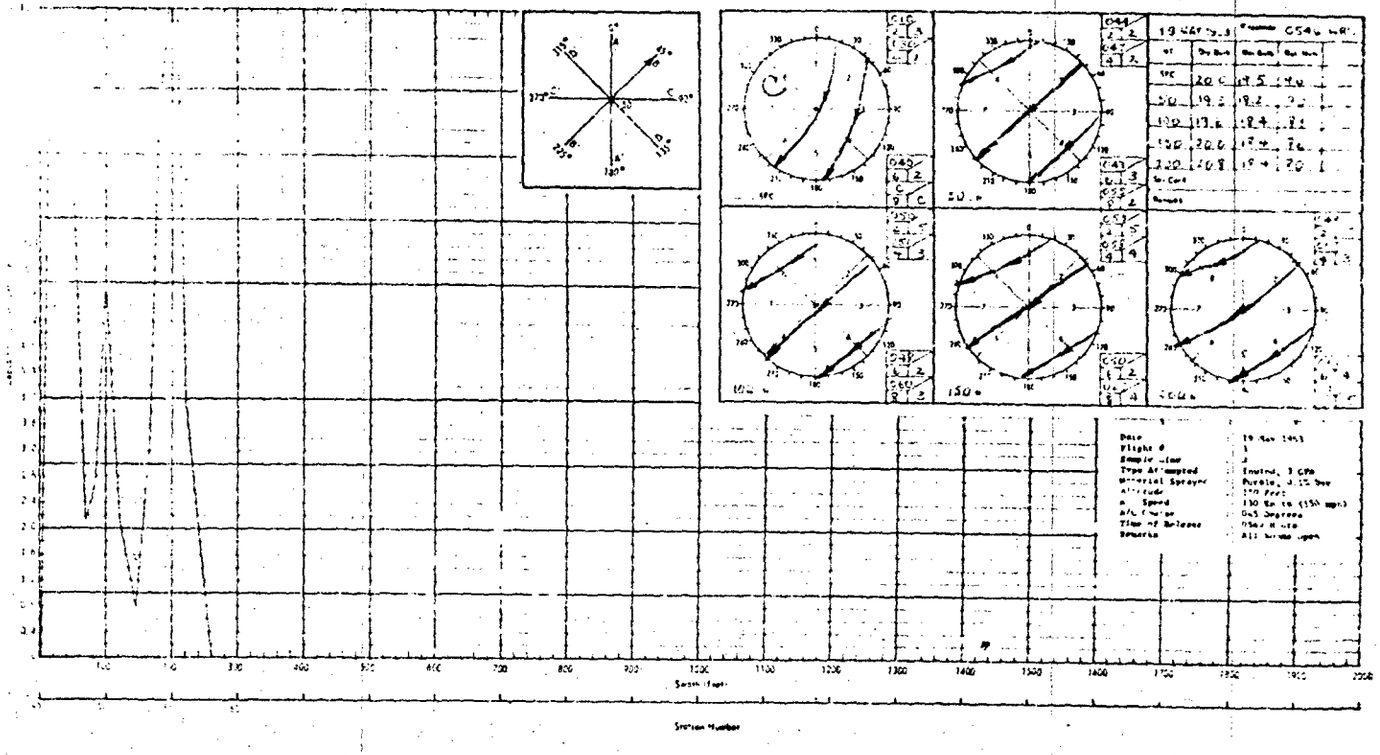
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 050° / 3.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-45 blank				46	12.9		
				47	8.9		
				48	2.1		
				49	2.7		
				50	5.7		
				51	2.1		
				52	0.8		
				53	3.2		
				54	8.5		
				55	10.8		
				56	4.0		
				57	1.1		
				58	0.0		
				59	0.0		
				60	0.0		
				61	0.0		
				62	0.0		
				63	0.0		
				Stations 64-100 blank			


Swath Feet
Station Number
Date
Flight #
Sampler line
Type Attempted
Material Sprayed
Altitude
Speed
A/C Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: Purple

DATE: 19 May 1963

FLIGHT #: 4

SAMPLE LINE: D

TIME OF RELEASE: 0603 hours

DURATION: 13 seconds

FLOW RATE: 280 GPM

SYSTEM: C-123/MC-1

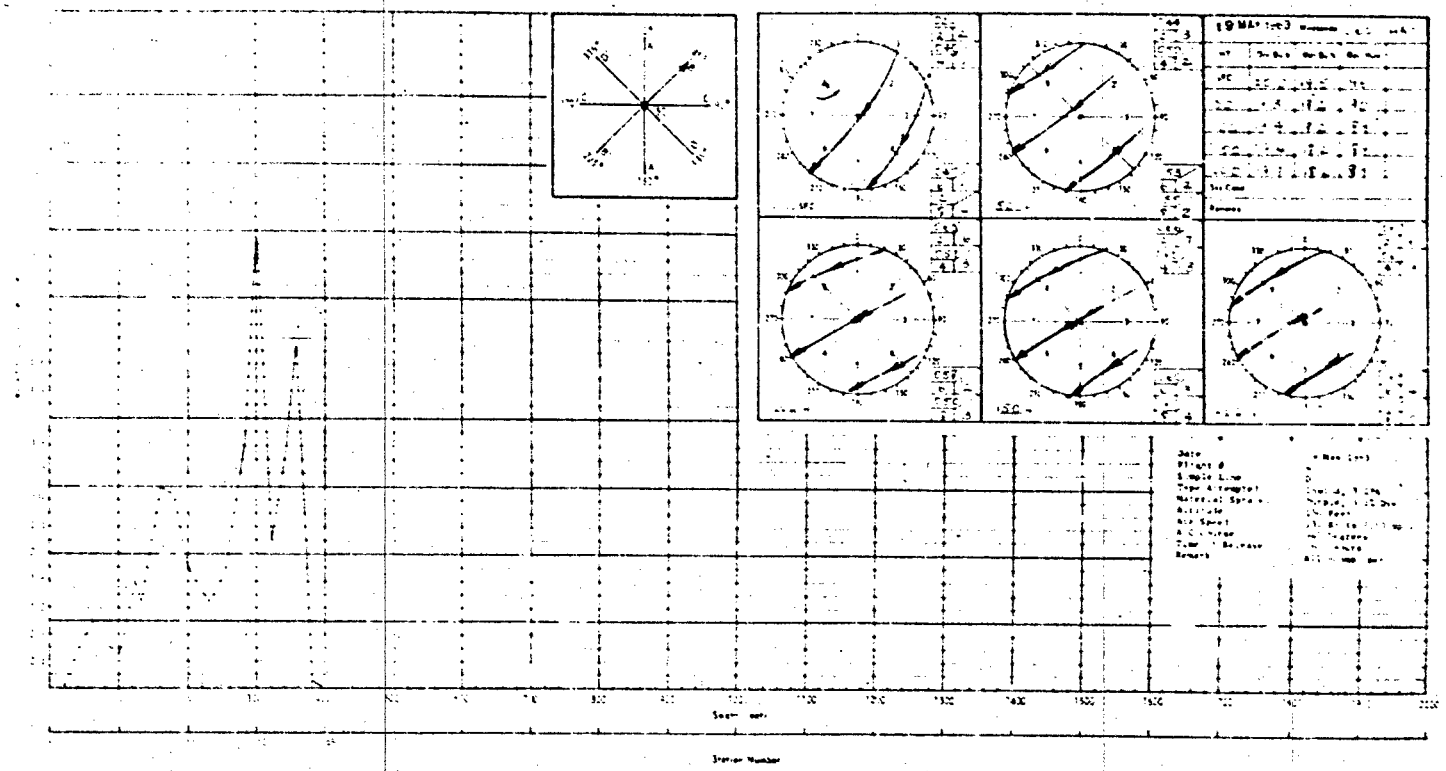
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 057° / 3.1 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-43 blank		44	0.0	69	blank		
		45	0.0	70	blank		
		46	0.1	71	blank		
		47	5.1	72	blank		
		48	3.5	73	blank		
		49	2.2	74	blank		
		50	6.7	75	0.0		
		51	3.6	76	0.0		
		52	1.7	77	blank		
		53	1.3	78	blank		
		54	1.5	79	blank		
		55	1.8	80	blank		
		56	2.9	81	blank		
		57	3.0	82	blank		
		58	1.3	83	blank		
		59	1.6	84	blank		
		60	0.5	85	blank		
		61	0.7	86	0.0		
		62	1.0	Stations 87-100 blank			
		63	0.6				
		64	0.0				
		65	0.0				
		66	0.0				
		67	blank				
		68	blank				



MASS DEPOSIT

MATERIAL: Purple

DATE: 19 May 1963

FLIGHT #: 5

SAMPLE LINE: D

TIME OF RELEASE: 0628 hours

DURATION: 13 seconds

FLOW RATE: 290 GPM

SYSTEM: C-123/MC-1

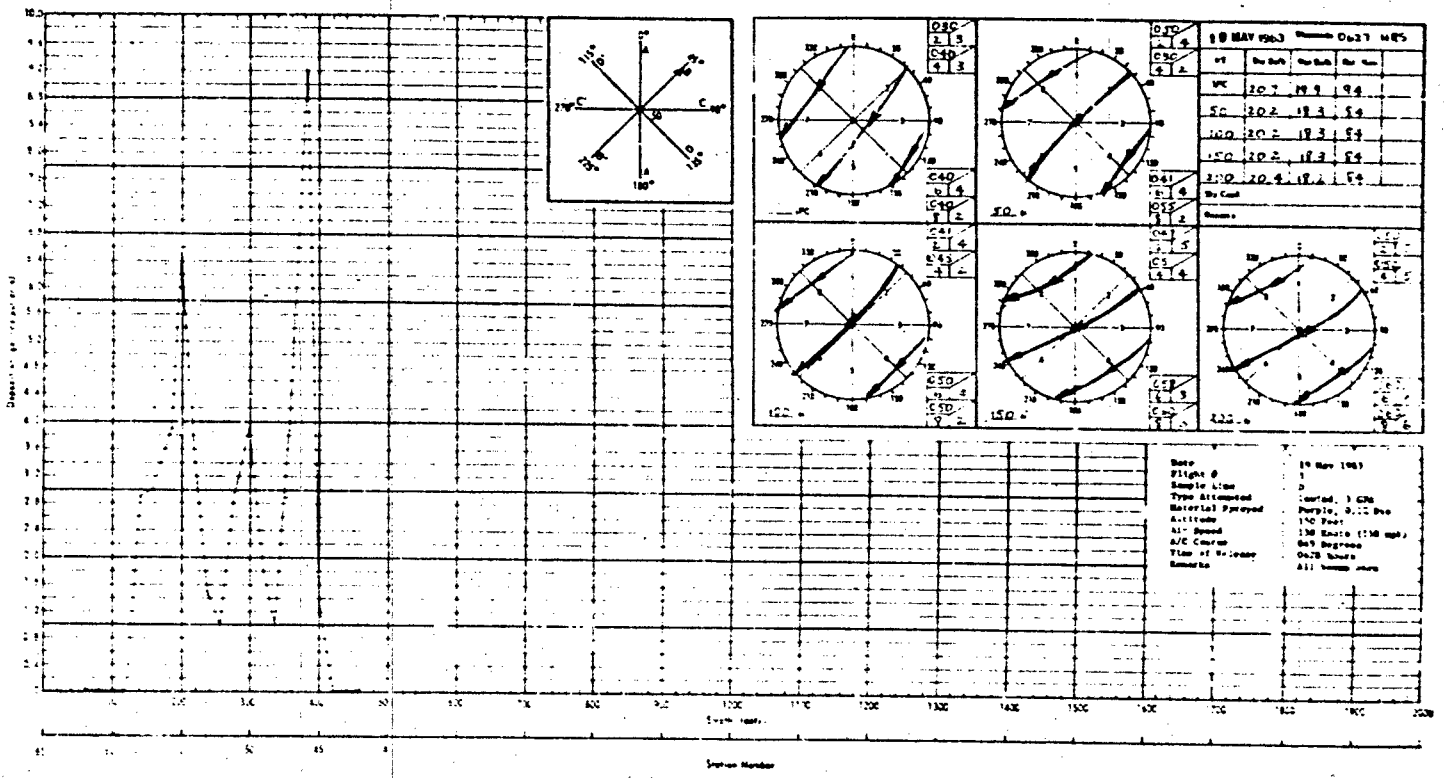
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 049° / 3.6 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-41 blank		42	0.0				
		43	0.0				
		44	0.0				
		45	1.4				
		46	9.2				
		47	3.9				
		48	1.0				
		49	1.8				
		50	3.9				
		51	3.0				
		52	1.0				
		53	1.5				
		54	3.6				
		55	6.5				
		56	3.9				
		57	3.0				
		58	2.9				
		59	0.0				
		60	0.0				
		61	0.0				
		62	0.0				
		Stations 63-100 blank					


Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Station Number

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 19 May 1963

DATE TEST FLOWN: 20 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN 71

NOZZLE TYPE: 3/8" check valve no tip

LIQUID TEMP 32° C

DURATION OF SPRAY: 16.4 Sec.

PUMP PRESSURE 80 psi before 40 psi during

PUMP R.P.M.: 3000 before 2500 during

NO. OF PUMPS: 2

FLOW METER READING: 450 GPM

TOTAL AMOUNT SPRAYED: 120.5 Gals.

FLOW RATE CALIBRATED. 441 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-22, 31-43
TAIL: 1-3, 9-11, 17-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3000	80	42	440

REMARKS: Mission cancelled due to ground fog.

MASS DEPOSIT

MATERIAL: Purple

DATE: 20 May 1963

FLIGHT #: 1

SAMPLE LINE: D

TIME OF RELEASE: 0449 hours

DURATION: 12 seconds

FLOW RATE: 440 GPM

SYSTEM: C-123/MC-1

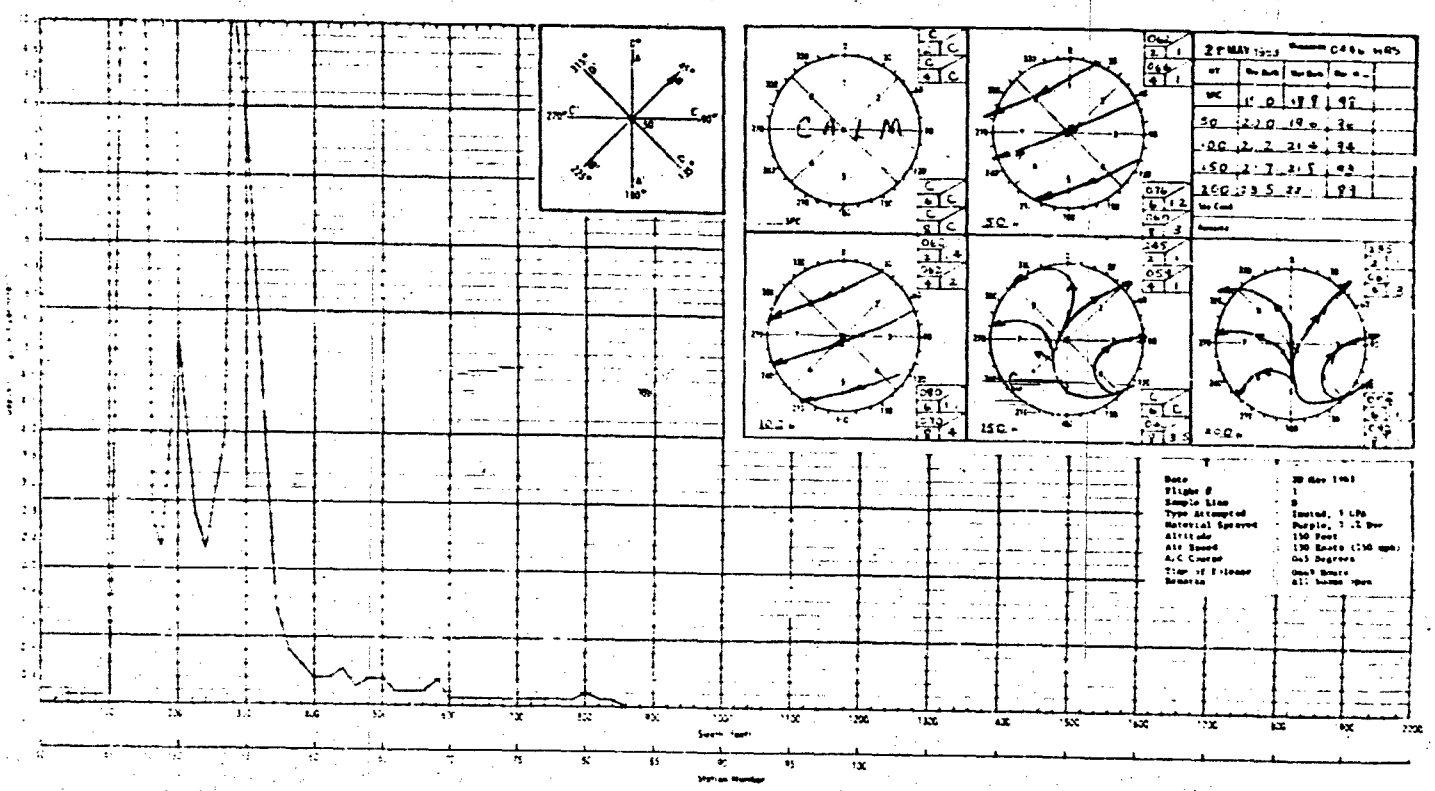
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 065°/1.7 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-41 blank		42	0.1	67	0.2		
		43	0.1	68	0.2		
		44	0.1	69	0.4		
		45	0.1	70	0.1		
		46	10.3	71	0.1		
		47	11.5	72	0.1		
		48	2.7	73	0.1		
		49	2.3	74	0.1		
		50	5.3	75	0.1		
		51	2.8	76	0.1		
		52	2.3	77	0.1		
		53	3.9	78	0.1		
		54	10.3	79	0.1		
		55	8.6	80	0.2		
		56	4.4	81	0.1		
		57	1.5	82	0.1		
		58	0.8	Stations 83-100 blank			
		59	0.6				
		60	0.4				
		61	0.4				
		62	0.5				
		63	0.3				
		64	0.4				
		65	0.4				
		66	0.2				


CALM
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 21 May 1963

DATE TEST FLOWN: 21 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 79

NOZZLE TYPE: 3/8" check valve no tip

LIQUID TEMP: 31° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: No. 1 75 psi before 38 psi during
No. 2 75 psi before 38 psi during

PUMP R.P.M.: 2800

NO. OF PUMPS: 2

FLOW METER READING: 435 GPM

TOTAL AMOUNT SPRAYED: 111 Gals.

FLOW RATE CALIBRATED: 444 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-23, 31-45
TAIL: 1-4, 9-11, 16-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	2800	75	38	425
2	2800	75	40	430
3	2800	75	36	420
4	2800	75	38	425
5	2800	75	38	425
6	2800	75	38	425

REMARKS:

MASS MEDIAN DIAMETER

DATE: 21 May 196[illegible]

CONVERSION FACTOR: 2.5

FLIGHT #: 6

PAPER: Kromekote, white

SAMPLE LINE: B

MATERIAL: Purple

FLOW RATE: 425 GPM

SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
48	5	6300*			
48	2	6200			
48	1	6100			
48	3	6000			
48	4	5900			
48	6	5700			
55	9	5500			
48	5	5300			
48	7	5200			

$$\text{MMD} = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(6300)}{2.5} = 388.8 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(6300) = 972.0 Microns

Min. Sph. Dia. = 36.0 Microns

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 425 GPM

DATE: 21 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 Feet

TIME OF RELEASE: 0450 Hours

AIRCRAFT COURSE: 045 Degrees

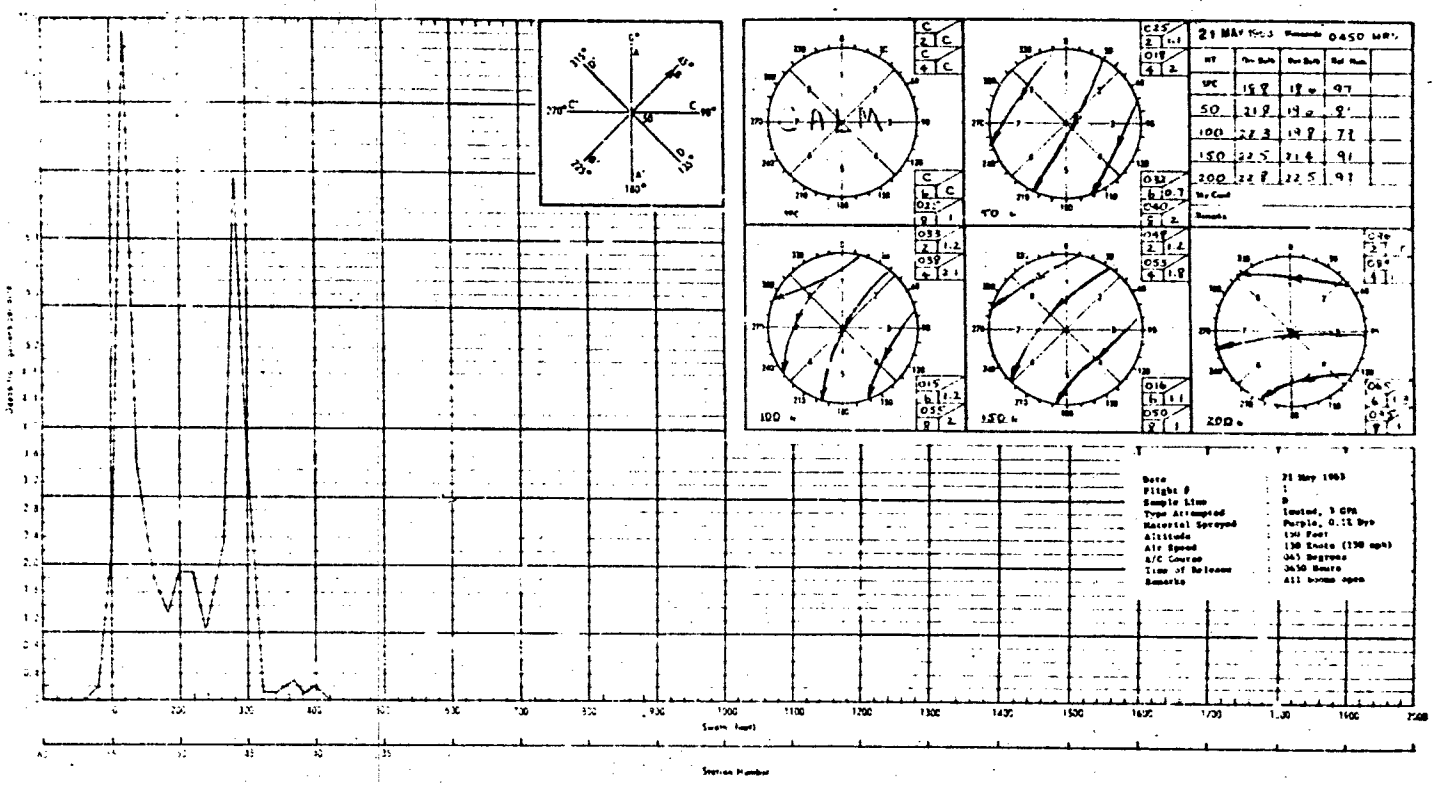
DURATION: 14 Seconds

WIND VECTOR: 046°/1.0 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-38 Blank		39	0.0				
		40	0.2				
		41	0.1				
		42	0.3				
		43	0.1				
		44	0.1				
		45	3.5				
		46	7.7				
		47	2.3				
		48	1.0				
		49	1.9				
		50	1.9				
		51	1.3				
		52	1.8				
		53	3.5				
		54	9.8				
		55	2.1				
		56	0.2				
		Stations 57-100 Blank					

$$\% \text{ Recovery} = \frac{0.202 \times 150 \times 37.8 \times 20}{425} = 53.9$$

Total 37.8


21 MAY 1963
0450 MST
HT
Dry Bulb
Wet Bulb
Rel Hum
SFC
50
100
150
200
Wind Cool
Remarks
100 m
150 m
200 m
Date
Flight #
Sample Size
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
21 May 1963
Purple, 0.1% Dye
130 Knots (150 mph)
045 Degrees
3650 Hours
All boxes open
Swath Feet
Station Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 21 May 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0514 hours

DURATION: 12 seconds

FLOW RATE: 430 GPM

SYSTEM: C-123/MC-1

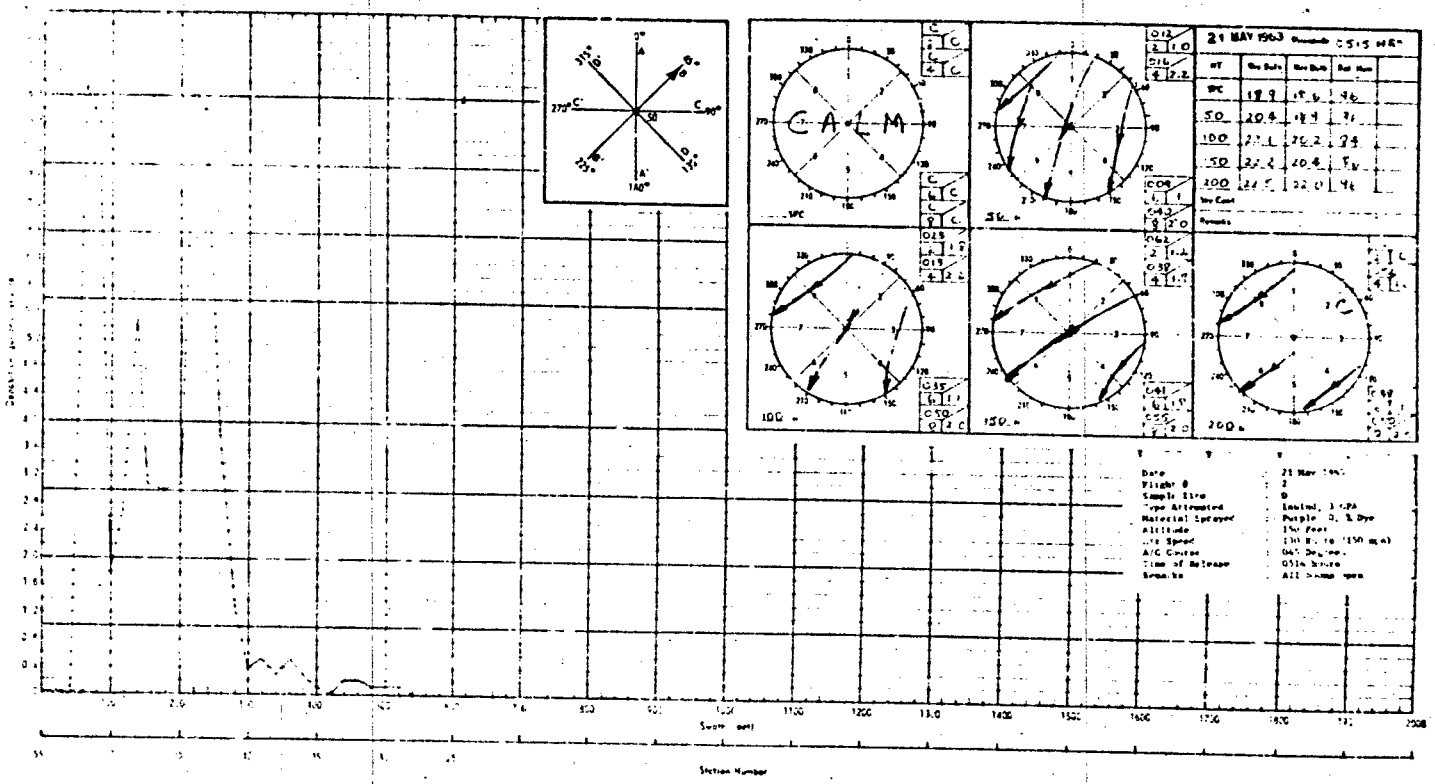
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 036° / 1.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-27 blank		28	0.0	Stations 53-100 blank			
		29	0.1				
		30	0.1				
		31	0.1				
		32	0.2				
		33	0.2				
		34	0.0				
		35	0.1				
		36	0.3				
		37	0.5				
		38	0.3				
		39	0.5				
		40	0.4				
		41	1.3				
		42	3.9				
		43	8.6				
		44	8.9				
		45	3.1				
		46	3.0				
		47	3.1				
		48	5.5				
		49	2.7				
		50	1.8				
		51	8.4				
		52	8.9				


21 MAY 1963
CALM
Section Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 21 May 1963

FLIGHT #: 3

SAMPLE LINE D

TIME OF RELEASE: 0535 hours

DURATION: 13 seconds

FLOW RATE: 420 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 knots (150 mph)

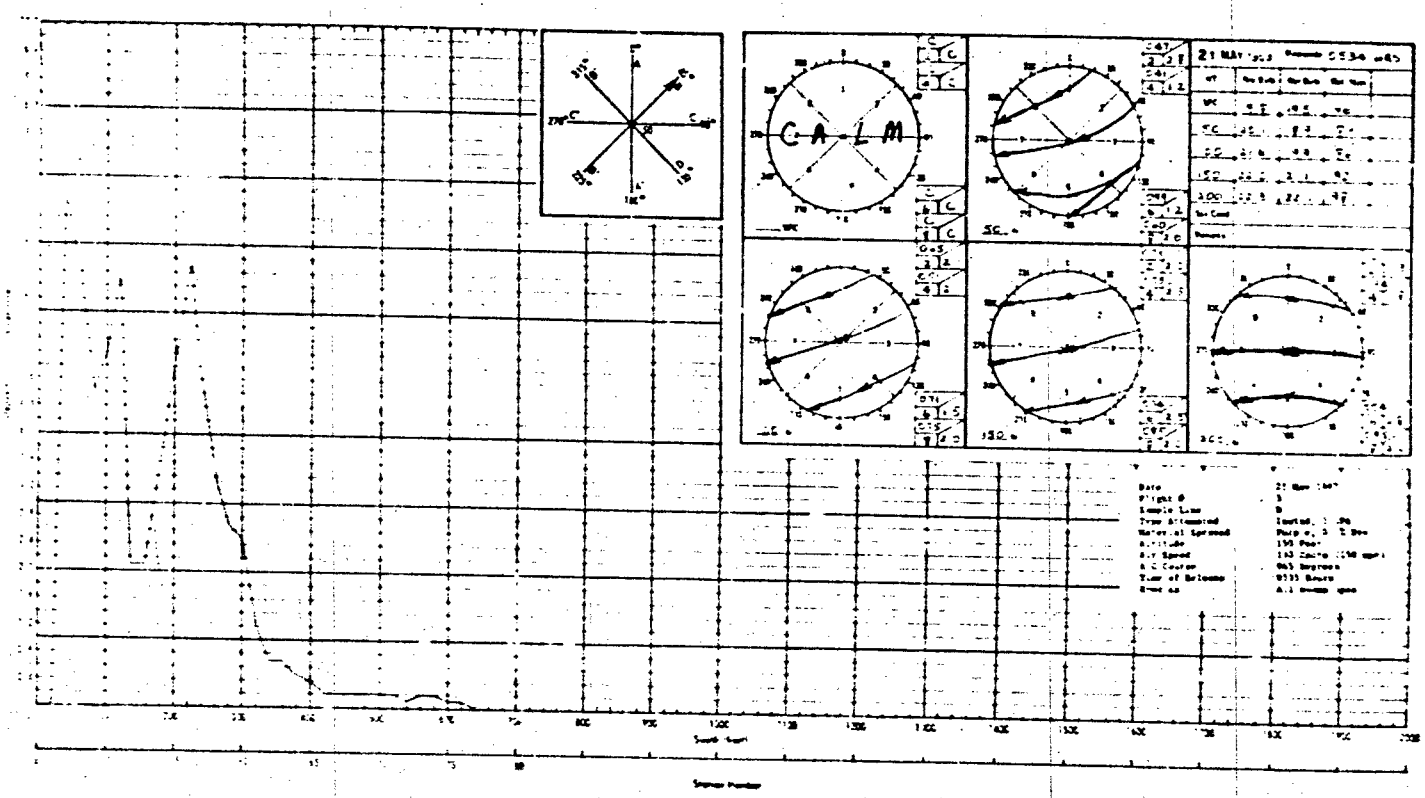
ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 075° / 1.9 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank				47	7.5	72	0.1
				48	6.4	73	0.2
				49	4.1	74	0.2
				50	5.2*	75	0.1
				51	6.3	76	0.1
				52	2.1	77	0.0
				53	2.1	78	0.0
				54	3.7	79	0.0
				55	5.0	Stations	
				56	6.5	80-100 blank	
				57	4.9		
				58	3.3		
				59	2.7		
				60	2.5		
				61	1.2		
				62	0.7		
				63	0.7		
				64	0.5		
				65	0.4		
				66	0.2		
				67	0.2		
				68	0.2		
				69	0.2		
				70	0.2		
				71	0.2		

* Discolored - possible contamination


CALM

MASS DEPOSIT

MATERIAL: Purple

DATE: 21 May 1963

FLIGHT #: 4

SAMPLE LINE: A

TIME OF RELEASE: 0555 hours

DURATION: 11 seconds

FLOW RATE: 425 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 knots (150 mph)

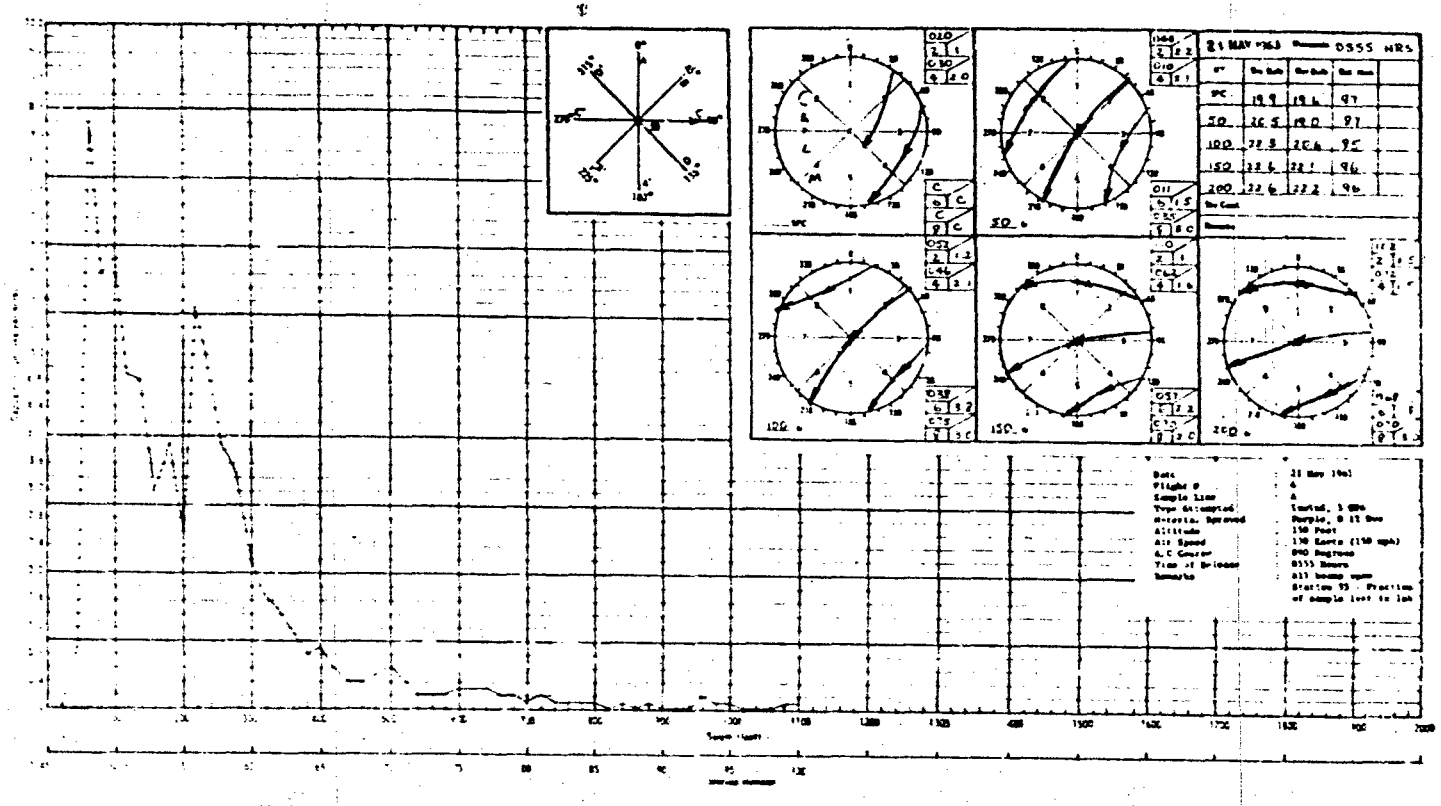
ALTITUDE: 150 feet

AIRCRAFT COURSE: 090 degrees

WIND VECTOR: 53° / 1.7 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank		47	0.9	72	0.2	97	0.0
		48	8.6	73	0.2	98	0.0
		49	6.4	74	0.2	99	0.1
		50	6.6	75	0.3	100	0.1
		51	4.9	76	0.3		
		52	4.8	77	0.3		
		53	3.2	78	0.2		
		54	3.9	79	0.2		
		55	2.6*	80	0.1		
		56	5.9	81	0.2		
		57	5.2	82	0.1		
		58	3.9	83	0.1		
		59	3.5	84	0.1		
		60	2.2	85	0.1		
		61	1.7	86	0.0		
		62	1.5	87	0.1		
		63	1.1	88	0.0		
		64	0.8	89	0.1		
		65	0.9	90	0.0		
		66	0.6	91	0.0		
		67	0.4	92	0.0		
		68	0.4	93	0.2		
		69	0.5	94	0.1		
		70	0.6	95	0.1		
		71	0.4	96	0.0		

* Spill


0555 HRS
Date
Flight #
Sample Line
Type Attempted
Altitude
Air Speed
A.C Course
Time of Release
Remarks
Station 95 - Position of sample line in ice

MASS DEPOSIT

MATERIAL: Purple

DATE: 21 May 1953

FLIGHT #: 5

SAMPLE LINE D

TIME OF RELEASE: 0623 hours

DURATION: 10 seconds

FLOW RATE. 425 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 knots (150 mph)

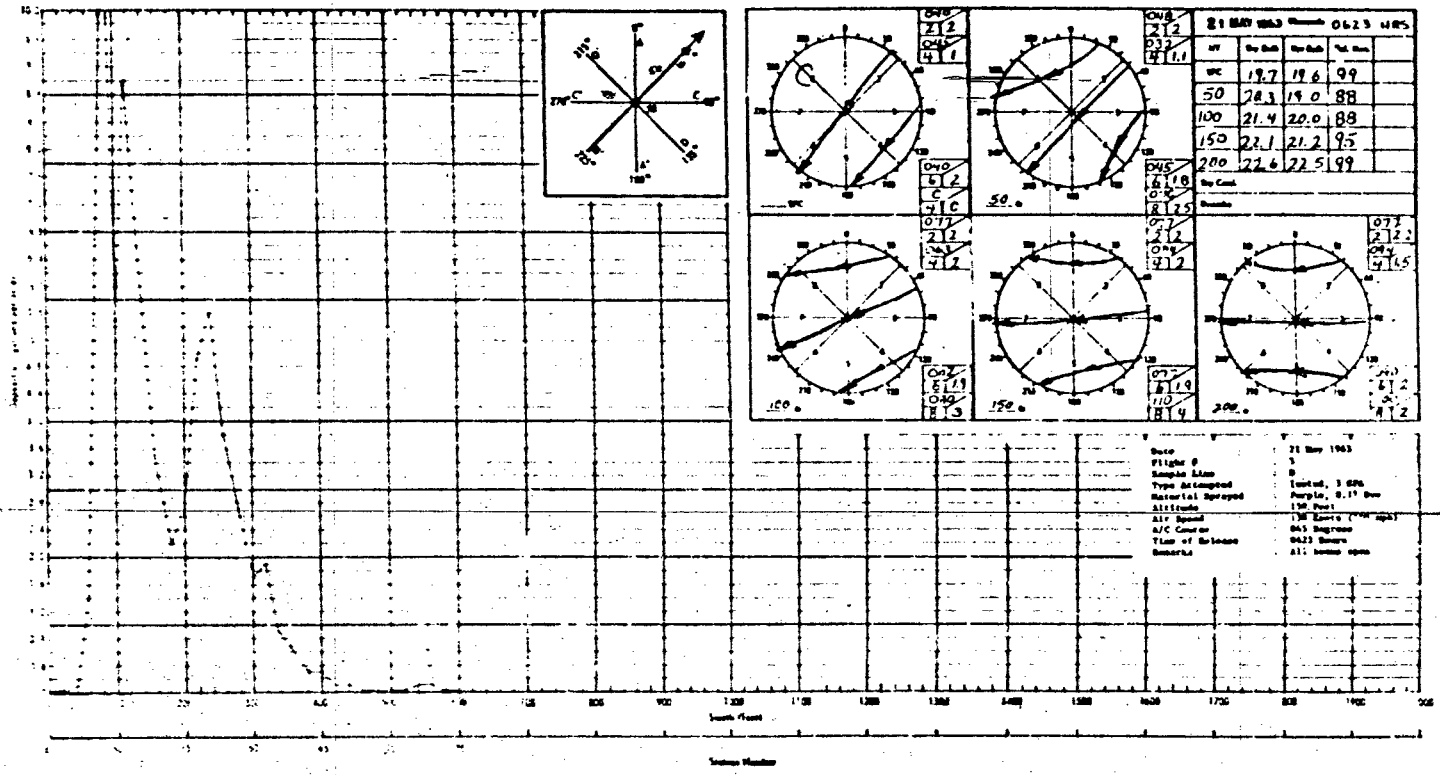
ALTITUDE: 150 feet

AIRCRAFT COURSE. 045 degrees

WIND VECTOR: 071° / 1.8 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank		47	0.1	72	0.1		
		48	1.4	73	0.1		
		49	12.9	74	0.0		
		50	5.5	75	0.0		
		51	9.0*	Stations 76-100 blank			
		52	5.8				
		53	3.5				
		54	2.2				
		55	2.7				
		56	4.9				
		57	5.6				
		58	3.8				
		59	2.7				
		60	1.7				
		61	1.9				
		62	0.9				
		63	0.7				
		64	0.3				
		65	0.3				
		66	0.1				
		67	0.1				
		68	0.0				
		69	0.0				
		70	0.0				
		71	0.0				

* Contamination


21 MAY 1963
0623 HRS
WC 19.7 19.6 99
50 20.3 19.0 88
100 21.4 20.0 88
150 22.1 21.2 95
200 22.6 22.5 99
50.
100
150
200
Date 21 May 1963
Flight 0
Sample Line 0
Type Delivered Tracked, 3 GPM
Material Sprayed Purple, 0.17 Dye
Altitude 150 Feet
Air Speed
A/C Course 045 Degrees
Time of Release 0623 Hours
Remarks All boxes open

MASS DEPOSIT

MATERIAL: Purple

DATE: 21 May 1963

FLIGHT #: 6

SAMPLE LINE: B

TIME OF RELEASE: 0649 hours

DURATION: 10 seconds

FLOW RATE: 425 GPM

SYSTEM: C-123/MC-1

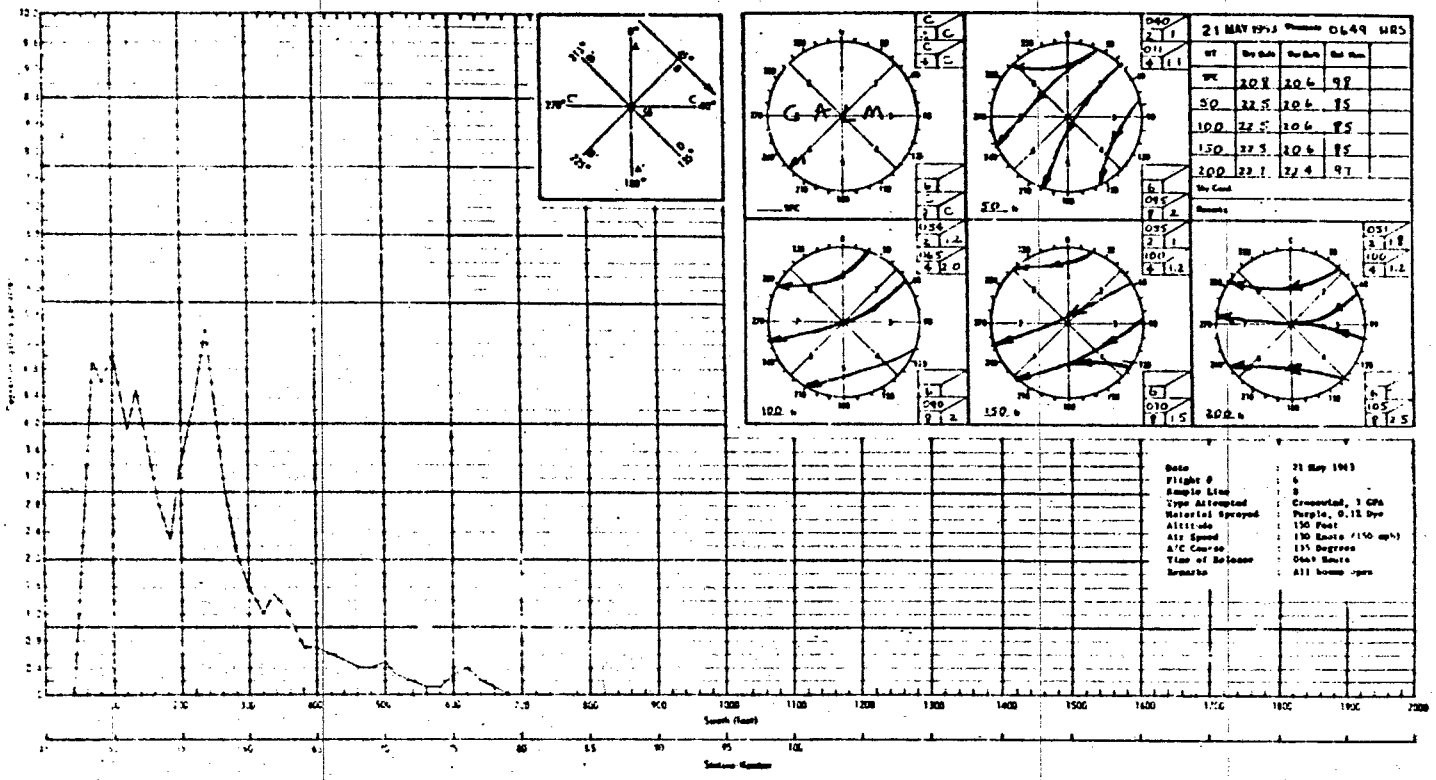
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 135 degrees

WIND VECTOR: 071° / 1.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-47 blank				48	4.9	73	0.1
				49	4.6	74	0.1
				50	5.0	75	0.3
				51	3.9	76	0.4
				52	4.5	77	0.2
				53	2.8	78	0.1
				54	2.3	Stations	
				55	3.4	79-100	
				56	4.5	blank	
				57	5.4		
				58	3.0		
				59	2.1		
				60	1.6		
				61	1.2		
				62	1.5		
				63	1.3		
				64	0.7		
				65	0.7		
				66	0.6		
				67	0.5		
				68	0.4		
				69	0.4		
				70	0.5		
				71	0.3		
				72	0.2		


21 MAY 1953
0649 HRS
Date : 21 May 1953
Flight # : 6
Sample Line : 8
Type Attempted : Crosscut, 1 GPA
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 135 Degrees
Time of Release : 0649 Hours
Remarks : All bomb open

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 21 May 1963

DATE TEST FLOWN: 22 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 92

NOZZLE TYPE: 3/8" check valve no tip

LIQUID TEMP: 32° C

DURATION OF SPRAY: 10 Sec.

PUMP PRESSURE: 68 psi before 34 psi during

PUMP R.P.M.: 2700

NO. OF PUMPS: 2

FLOW METER READING: 430 GPM

TOTAL AMOUNT SPRAYED: 74.5 Gals.

FLOW RATE CALIBRATED: 447 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-23, 28-48
TAIL: 1-4, 8-12, 16-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	---	69	---	420
2	---	73	37	435
3	---	73	---	435
4	---	76	---	420
5	---	85	---	420

REMARKS: Tail boom cut off after 3 runs due to excessive leaking.

MASS DEPOSIT

MATERIAL: Purple

DATE: 22 May 1963

FLIGHT #: 1

SAMPLE LINE: B

TIME OF RELEASE: 0502 hours

DURATION: 10 seconds

FLOW RATE: 420 GPM

SYSTEM: C-123/MC-1

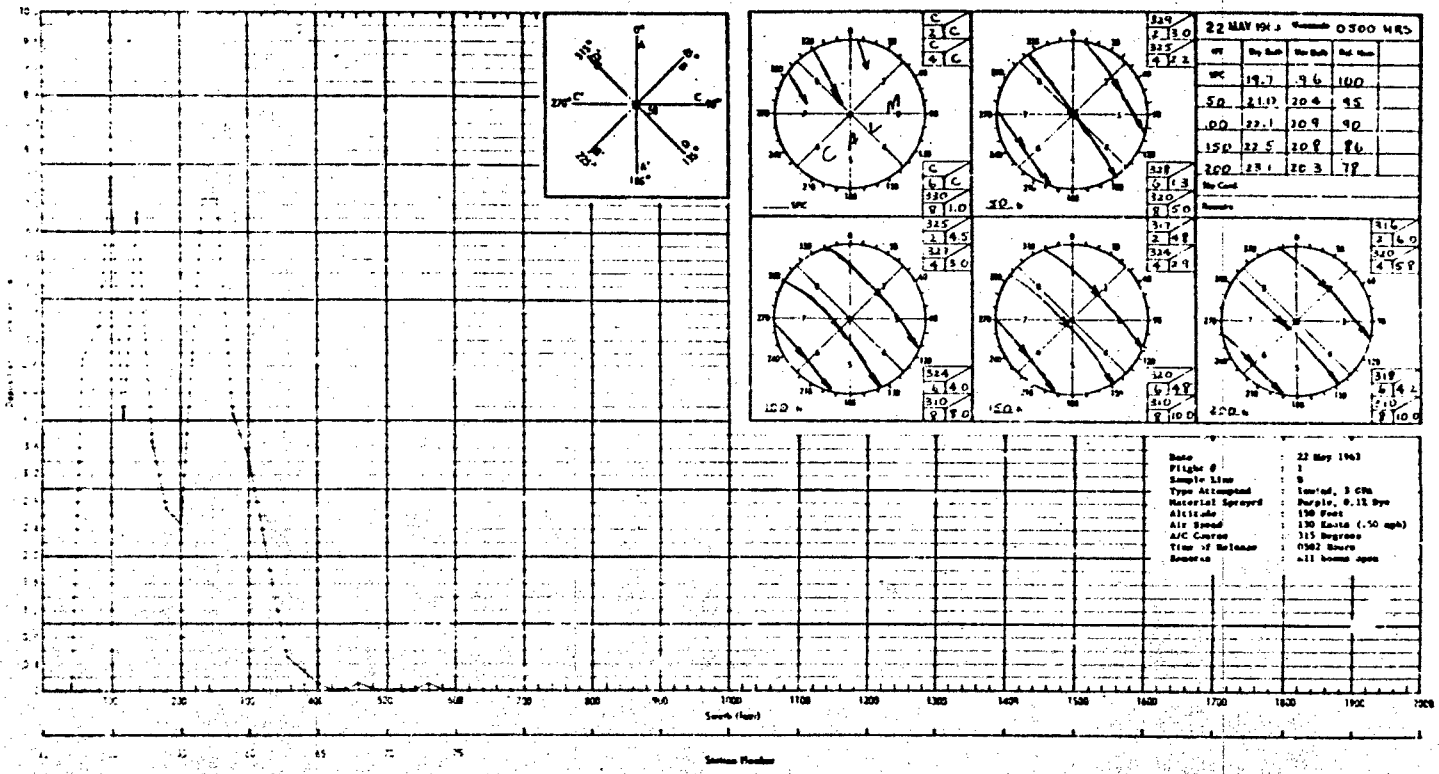
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 156 feet

AIRCRAFT COURSE: 315 degrees

WIND VECTOR: 322°/4.7 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank				47	0.0	72	0.0
				48	4.9	73	0.1
				49	5.4	74	0.0
				50	7.6	75	0.0
				51	4.0	Stations	
				52	7.1	76-100	
				53	3.7	blank	
				54	2.7		
				55	2.5		
				56	4.9		
				57	7.3		
				58	7.3		
				59	4.1		
				60	3.5		
				61	2.4		
				62	1.4		
				63	0.5		
				64	0.3		
				65	0.1		
				66	0.0		
				67	0.0		
				68	0.1		
				69	0.0		
				70	0.0		
				71	0.0		


22 MAY 1963
0500 HRS
Date : 22 May 1963
Flight # : 1
Sample Line : 6
Type Attempted : Tested, 3 GPA
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 315 Degrees
Time of Release : 0502 Hours
Remarks : all booms open
Sample Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 22 May 1963

FLIGHT #: 2

SAMPLE LINE: B

TIME OF RELEASE: 0524 hours

DURATION: 13 seconds

FLOW RATE: 435 GPM

SYSTEM: C-123/MC-1

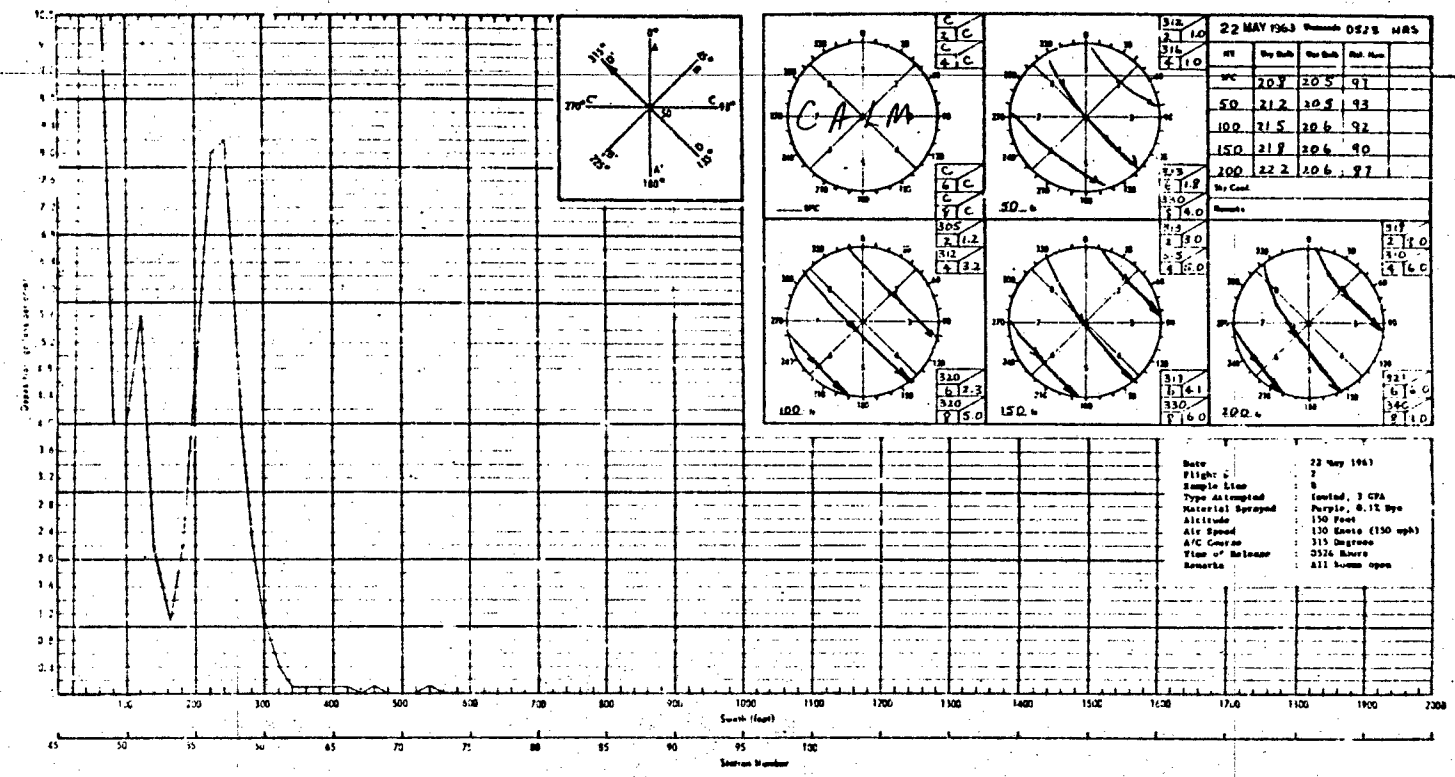
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 315 degrees

WIND VECTOR: 319° / 4.4 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-45 blank				46	0.0	71	0.0
				47	12.4	72	0.1
				48	11.1	73	0.0
				49	4.0	74	0.0
				50	4.0	Stations	
				51	5.6	75-100	
				52	2.2	blank	
				53	1.1		
				54	2.3		
				55	4.5		
				56	8.0		
				57	8.2		
				58	3.9		
				59	2.2		
				60	1.1		
				61	0.4		
				62	0.1		
				63	0.1		
				64	0.1		
				65	0.1		
				66	0.1		
				67	0.0		
				68	0.1		
				69	0.0		
				70	0.0		


22 MAY 1963
CALM
Date 22 May 1963
Flight # 2
Sample Line 8
Type Attempted Ionized, 3 GPA
Material Sprayed Purple, 0.1% Dye
Altitude 150 Feet
Air Speed 130 Knots (150 mph)
A/C Course 315 Degrees
Time of Release 0524 Hours
Remarks All Screens open
Swath (feet)
Station Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 22 May 1963

FLIGHT #: 3

SAMPLE LINE: B

TIME OF RELEASE: 0548 Hours

DURATION: 11 Seconds

FLOW RATE: 435 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

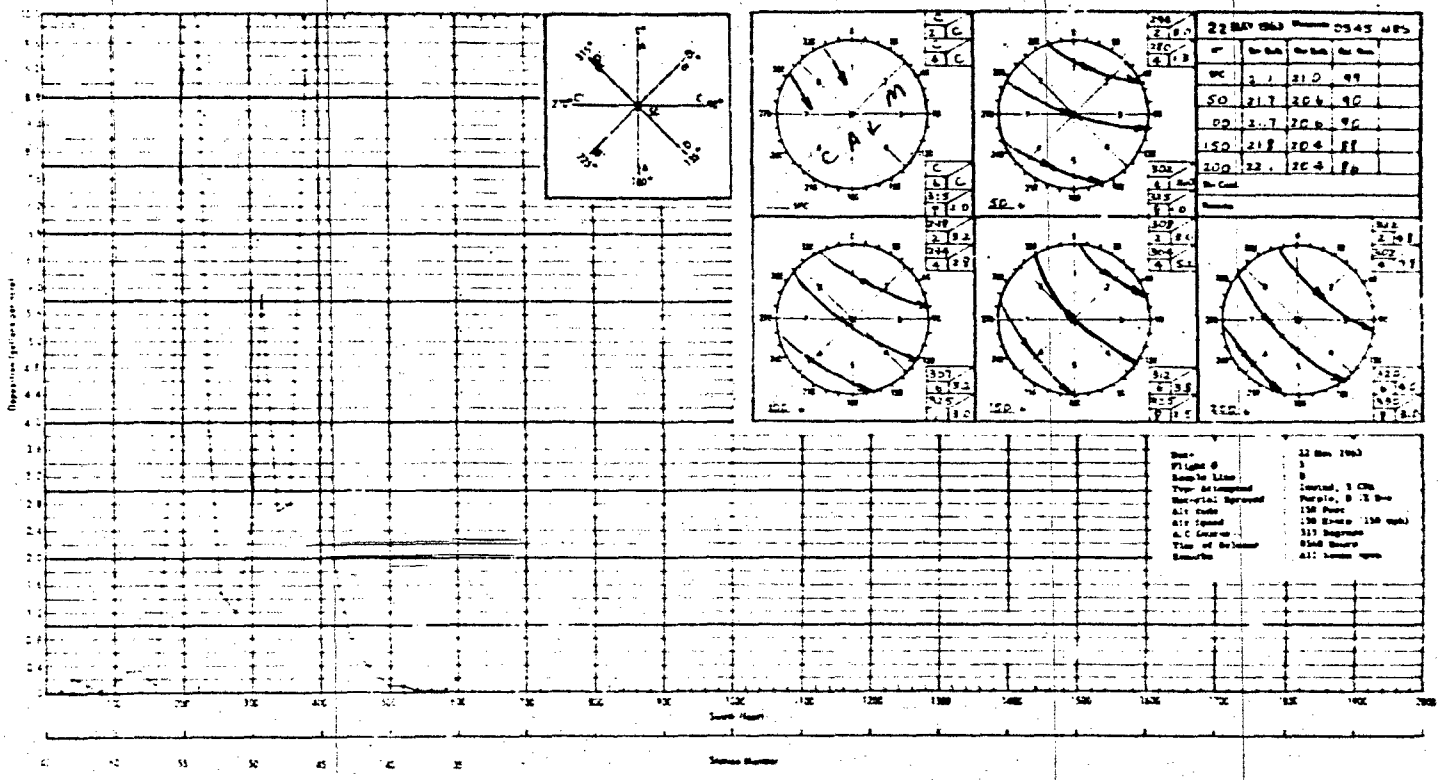
AIRCRAFT COURSE: 315 Degrees

WIND VECTOR: 313°/2.9 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-34 blank		35	0.2	60	0.1		
		36	0.0	61	0.0		
		37	0.0	62	0.1		
		38	0.0	63	0.2		
		39	0.1	Stations 64-100 Blank			
		40	0.1				
		41	0.3				
		42	0.5				
		43	0.9				
		44	2.0				
		45	18.3				
		46	9.0				
		47	2.8				
		48	2.7				
		49	5.9				
		50	2.5				
		51	1.2				
		52	1.5				
		53	3.9				
		54	11.5				
		55	11.8				
		56	3.3				
		57	0.1				
		58	0.3				
		59	0.3				

% Recovery = 0.202x150x79.6x20.00 = 110.9

Total 79.6


CALM

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 420 GPM

DATE: 22 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: B

ALTITUDE: 150 feet

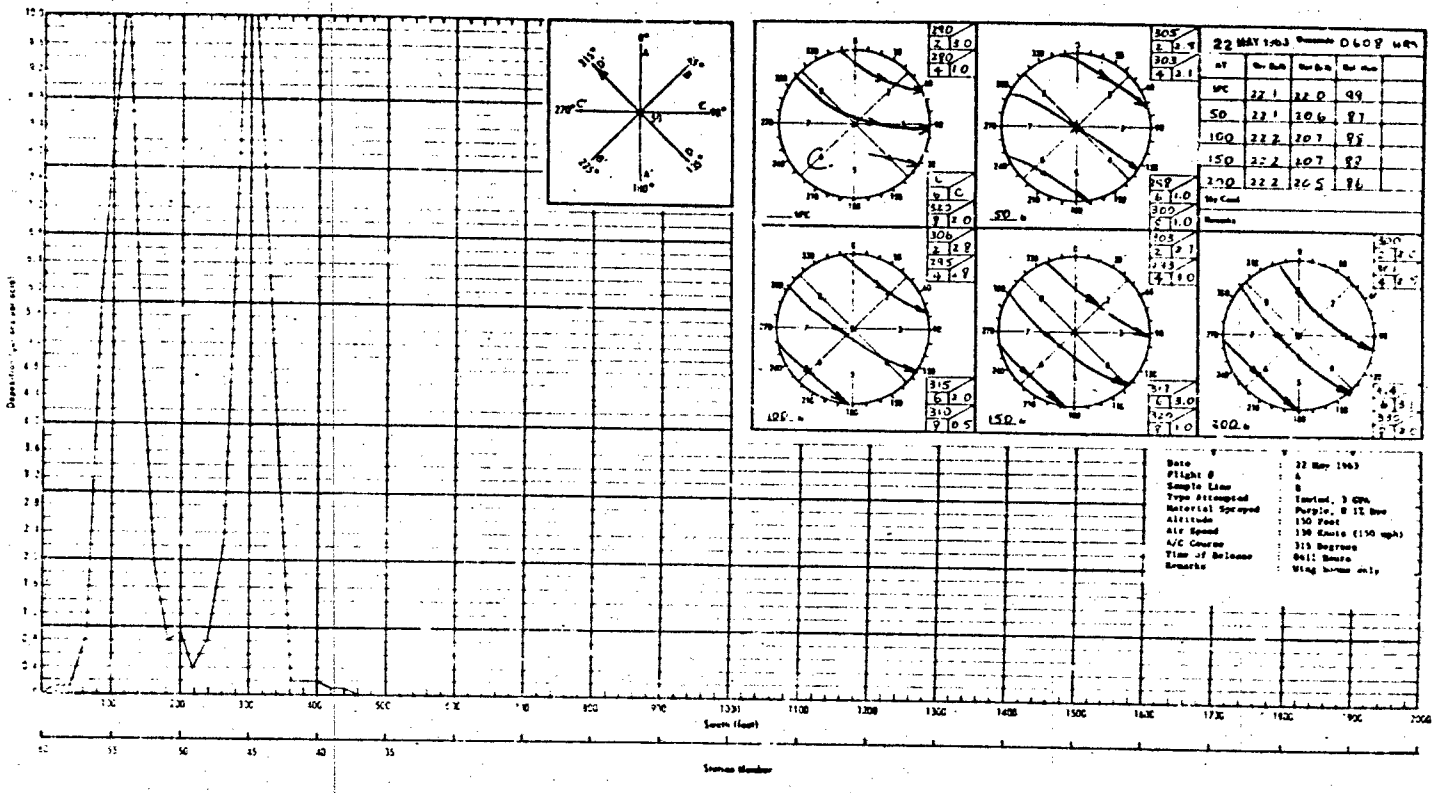
TIME OF RELEASE: 0611 hours

AIRCRAFT COURSE: 315 degrees

DURATION: 11 seconds

WIND VECTOR: 306° / 2.0 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-32 blank		33	0.0	58	0.1		
		34	0.0	59	0.1		
		35	0.0	60	0.0		
		36	0.0	61	0.0		
		37	0.0	62	0.0		
		38	0.1	63	0.0		
		39	0.1	64	0.0		
		40	0.2	65	0.0		
		41	0.2	66	0.0		
		42	0.2	Stations 67-100 blank			
		43	3.1				
		44	7.2				
		45	14.0				
		46	8.0				
		47	2.3				
		48	0.8				
		49	0.4				
		50	0.9				
		51	0.8				
		52	1.9				
		53	5.4				
		54	10.8				
		55	8.2				
		56	5.8				
		57	0.9				


22 MAY 1963
0608
SFC
50
100
150
200
Date : 22 May 1963
Flight # : 4
Sample Line : 8
Type Attempted : Tactical, 3 GPA
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 315 Degrees
Time of Release : 0611 Hours
Remarks : Wing Drops only
South (feet)
Sensor Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 22 May 1963

FLIGHT #: 5

SAMPLE LINE: B

TIME OF RELEASE: 0632 hours

DURATION: 9 seconds

FLOW RATE: 440 GPM

SYSTEM: C-123/MC-1

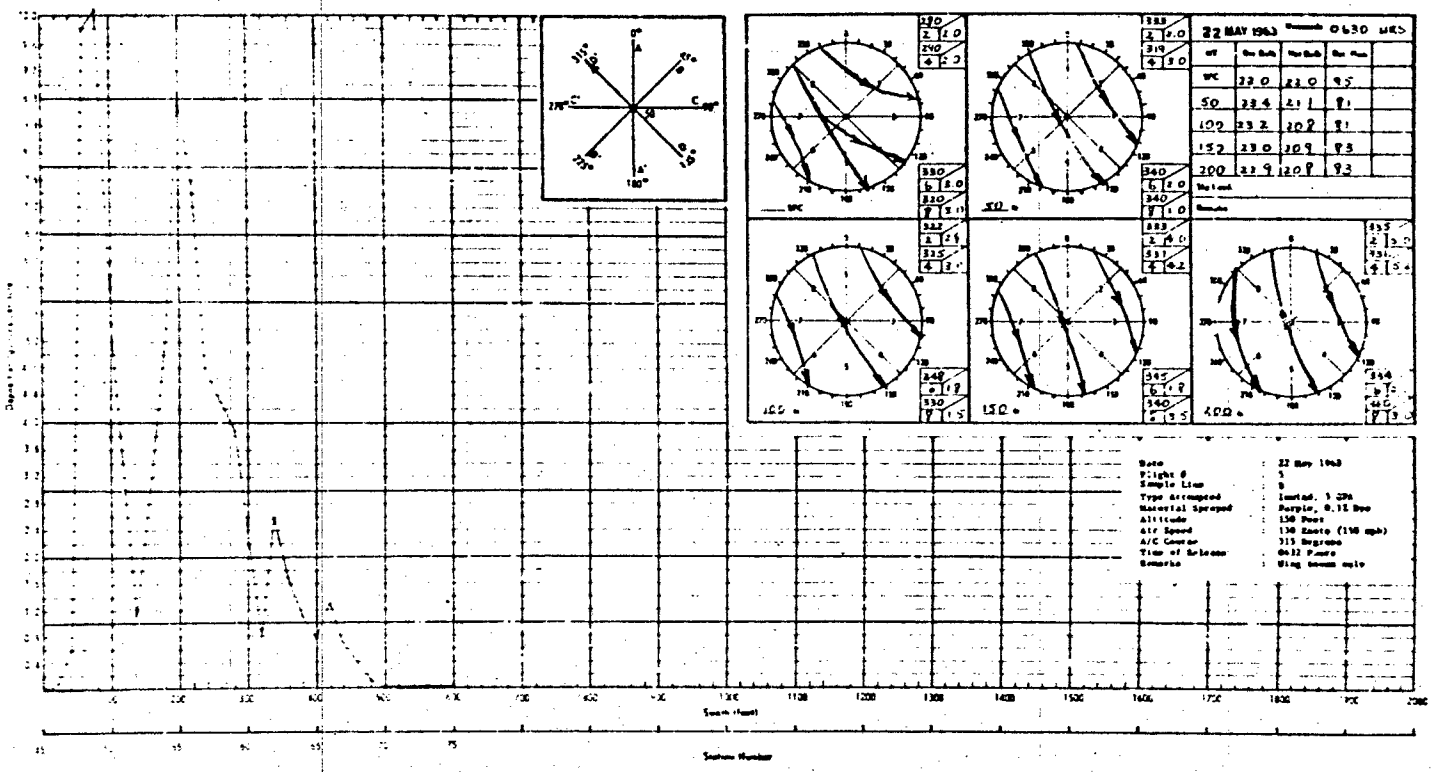
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 315 degrees

WIND VECTOR: 332° / 2.8 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-41 blank				42	0.0	67	0.7
				43	0.0	68	0.4
				44	0.0	69	0.1
				45	0.0	70	0.0
				46	0.0	71	0.0
				47	0.6	72	0.0
				48	9.8	73	0.0
				49	10.1	74	0.0
				50	5.5	75	0.0
				51	3.0	76	0.0
				52	1.1	77	0.0
				53	3.2	78	0.0
				54	5.2	79	0.0
				55	8.8	80	0.0
				56	7.6	81	0.0
				57	4.8	82	0.0
				58	4.3	83	0.0
				59	3.9	84	0.0
				60	2.4	85	0.0
				61	0.8	86	0.0
				62	2.6	87	0.0
				63	1.7	Stations 88-100 blank	
				64	1.1		
				65	0.8		
				66	1.3		


22 MAY 1963
0630 GMT
Date
Flight #
Sample Line
Type Aerosprayed
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Swath (feet)
Sample Number

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 22 May 1963

DATE TEST FLOWN: 23 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 66

NOZZLE TYPE: 3/8" check valve no tip

LIQUID TEMP: 31.3° C

DURATION OF SPRAY: 30 Sec.

PUMP PRESSURE: 57 psi before 26 psi during

PUMP R.P.M.: 2500 before 2000 during

NO. OF PUMPS: 1

FLOW METER READING: 205 GPM

TOTAL AMOUNT SPRAYED: 102.5 Gals.

FLOW RATE CALIBRATED: 205 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-22, 28-72
TAIL: No tail boom

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	2500 before 2050 during	57	58	200
2	2500 before 2050 during	57	28	200
3	2500 before 2050 during	57	28	205
4	2500 before 2050 during	57	28	205

REMARKS: Approximation of configuration used for 1½ gal/A as calibrated 62.

MASS MEDIAN DIAMETER

DATE: 23 May 1963

CONVERSION FACTOR: 2.5

FLIGHT #: 4

PAPER: Kromekote, white

SAMPLE LINE: A

MATERIAL: Purple

FLOW RATE: 205 GPM

SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
47	5	6900*			
47	1	6700			
47	2	6600			
47	6	6500			
47	7	6400			
47	4	6300			
47	2	6200			
48	8	6100			
48	9	6000			
48	10	5900			

$$\text{MMD} = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(6900)}{2.5} = 423.1 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(6900) = 1057.8 Microns

Min. Sph. Dia. = 36.0 Microns

MASS DEPOSIT

MATERIAL: Purple

DATE: 23 May 1963

FLIGHT #: 1

SAMPLE LINE: C

TIME OF RELEASE: 0450 Hours

DURATION: 11 Seconds

FLOW RATE: 200 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

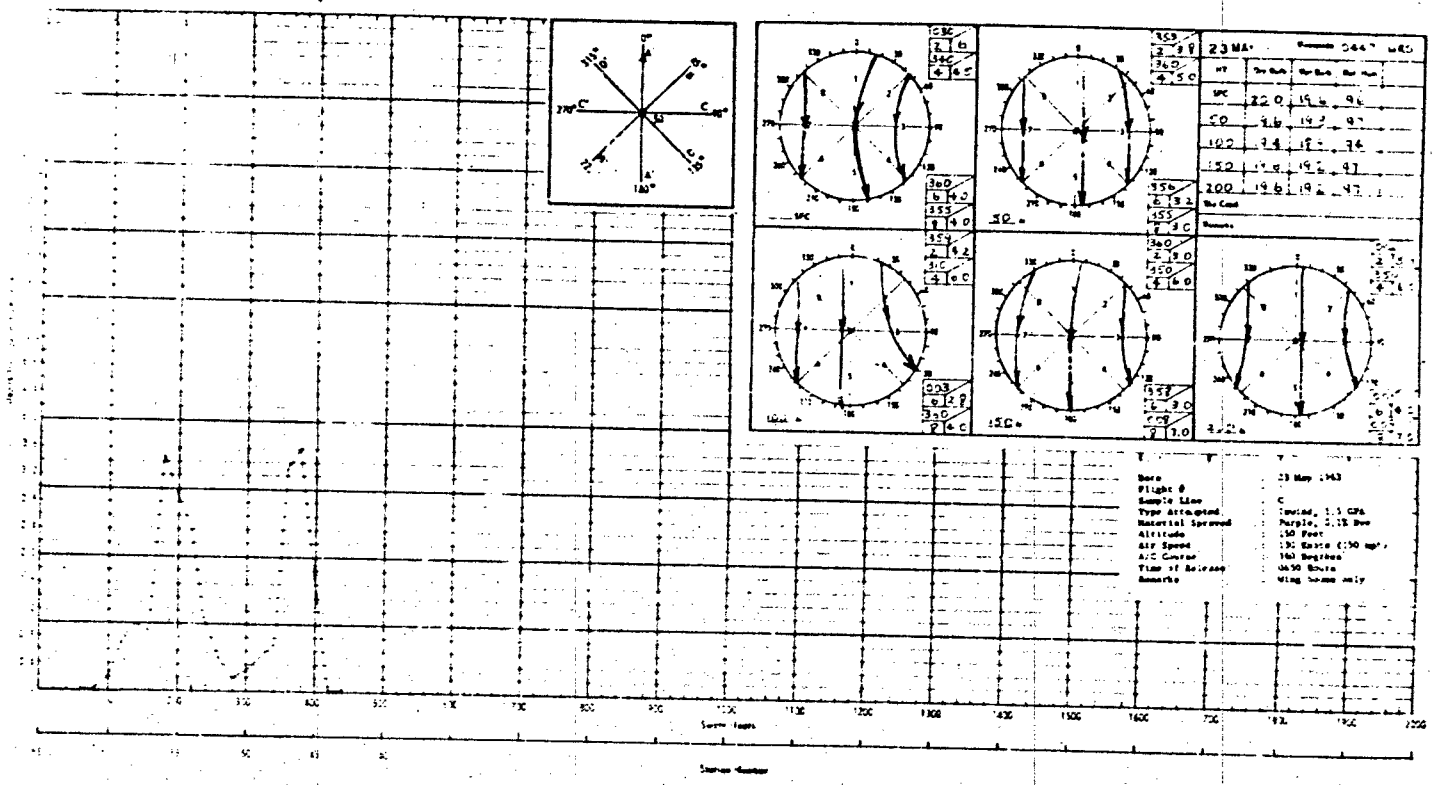
AIRCRAFT COURSE: 360 Degrees

WIND VECTOR: 360°/4.7 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-42 Blank		43	0.0				
		44	0.0				
		45	1.7				
		46	3.6				
		47	3.3				
		48	0.7				
		49	0.5				
		50	0.3				
		51	0.2				
		52	0.5				
		53	1.1				
		54	2.4				
		55	2.9				
		56	3.5				
		57	0.9				
		58	1.0				
		59	0.7				
		60	0.2				
		61	0.0				
		62	0.0				
		Stations 63-100 Blank					

$$\% \text{ Recovery} = \frac{0.202 \times 150 \times 23.5 \times 20.00}{200} = 71.2$$

Total 23.5


23 MAY
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Wing Spray only
Serial Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 23 May 1963

FLIGHT #: 2

SAMPLE LINE: C

TIME OF RELEASE: 0511 hours

DURATION: 12 seconds

FLOW RATE: 200 GPM

SYSTEM: C-123/MC-1

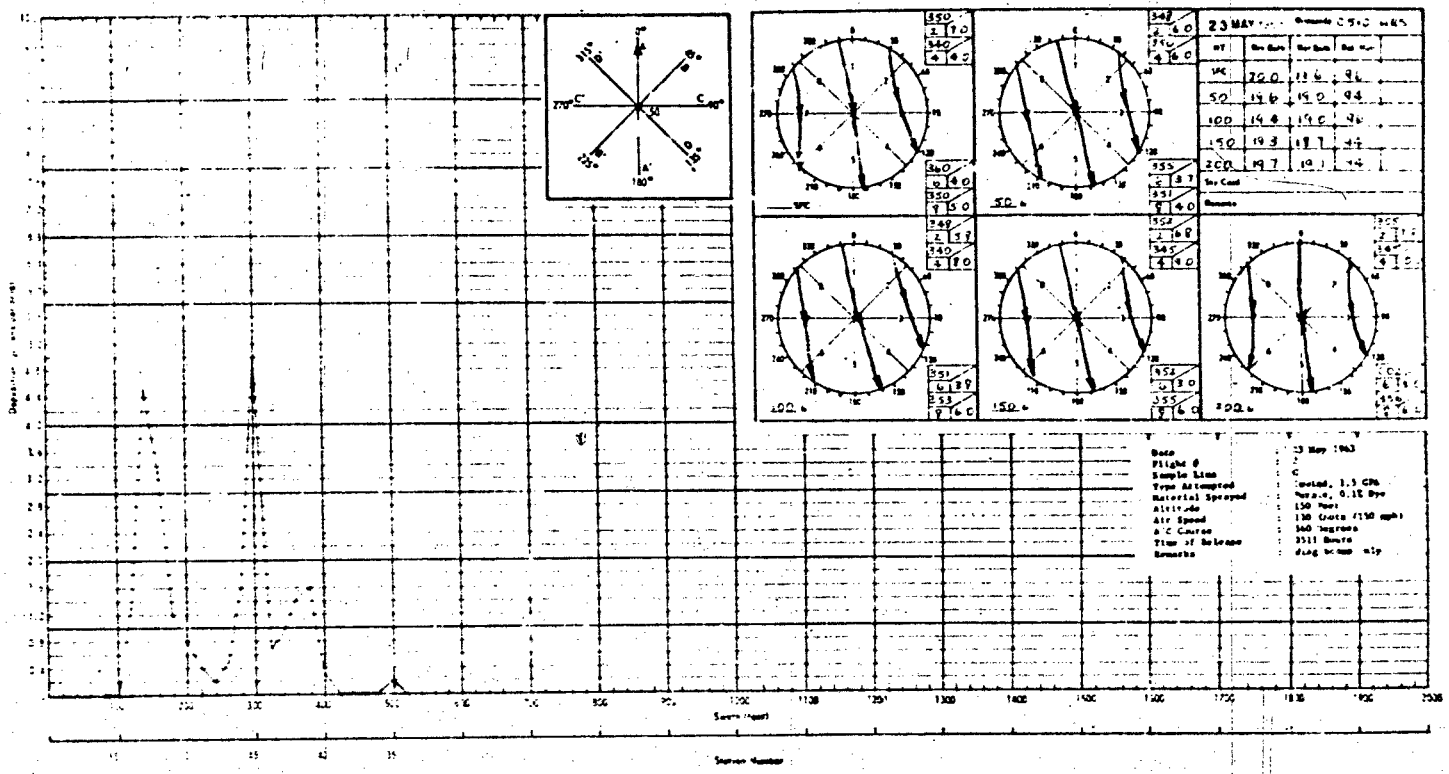
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 360 degrees

WIND VECTOR: 351° / 5.5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-32 blank		33	0.0	Stations 57-100 blank			
		34	0.0				
		35	0.2				
		36	0.0				
		37	0.0				
		38	0.0				
		39	0.0				
		40	0.3				
		41	1.6				
		42	1.4				
		43	0.9				
		44	0.7				
		45	5.0				
		46	1.6				
		47	0.5				
		48	0.2				
		49	0.4				
		50	0.8				
		51	1.2				
		52	3.3				
		53	4.5				
		54	1.3				
		55	0.0				
		56	0.0				


23 MAY
SFC
50
100
150
200
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A C Course
Time of Release
Remarks
23 May 1963
150 feet
360 degrees
3511 hours

MASS DEPOSIT

MATERIAL: Purple

DATE: 23 May 1963

FLIGHT #: 3

SAMPLE LINE: C

TIME OF RELEASE: 0531 Hours

DURATION: 10 Seconds

FLOW RATE: 205 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

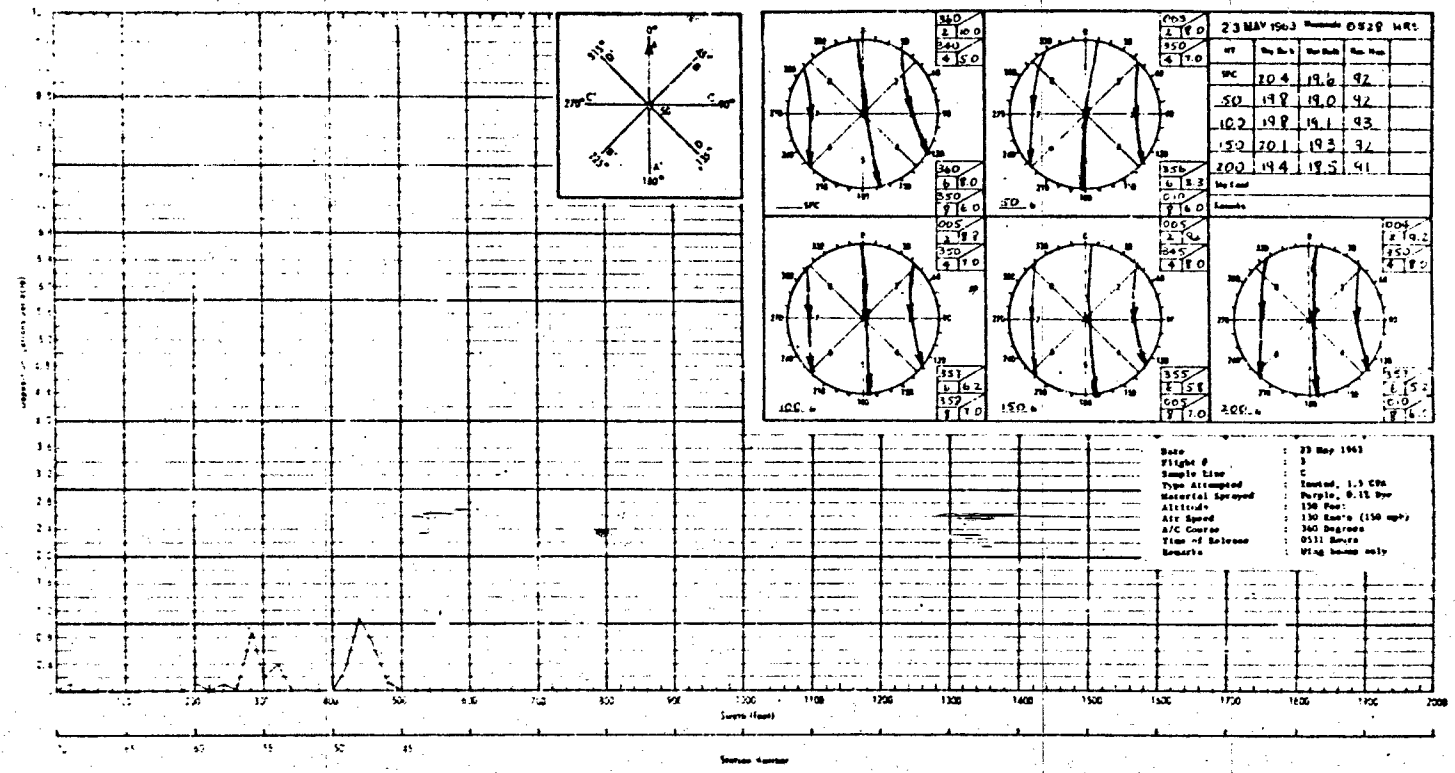
AIRCRAFT COURSE: 360 Degrees

WIND VECTOR: 358°/7.5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-43 Blank				44	0.0	69	0.1
				45	0.0	70	0.0
				46	0.1	71	0.0
				47	0.7	72	0.0
				48	1.1	73	0.0
				49	0.3	74	0.0
				50	0.0	75	0.0
				51	0.0	76	0.0
				52	0.0	77	0.0
				53	0.0	78	0.0
				54	0.4	79	0.0
				55	0.2	80	0.0
				56	0.9	81	0.0
				57	0.0	82	0.0
				58	0.1	83	0.0
				59	0.0	84	0.0
				60	0.1	85	0.0
				61	0.0	86	0.0
				62	0.0	Station 87-100	
				63	0.0	Blank	
				64	0.0		
				65	0.0		
				66	0.0		
				67	0.0		
				68	0.0		

$$\% \text{ Recovery} = \frac{0.202 \times 150 \times 4.0 \times 20.00}{205} = 11.8$$

Total 4.0


23 MAY 1963
0528 HRS
SFC
20.4
19.6
92
50
19.8
19.0
92
100
19.8
19.1
93
150
20.1
19.3
92
200
19.4
19.5
91
Date : 23 May 1963
Flight # : 3
Sample time : C
Type Attempted : Instant, 1.5 GPM
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 360 Degrees
Time of Release : 0511 Hours
Remarks : Wing boxes only
Source distance

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 205 GPM

DATE: 23 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 feet

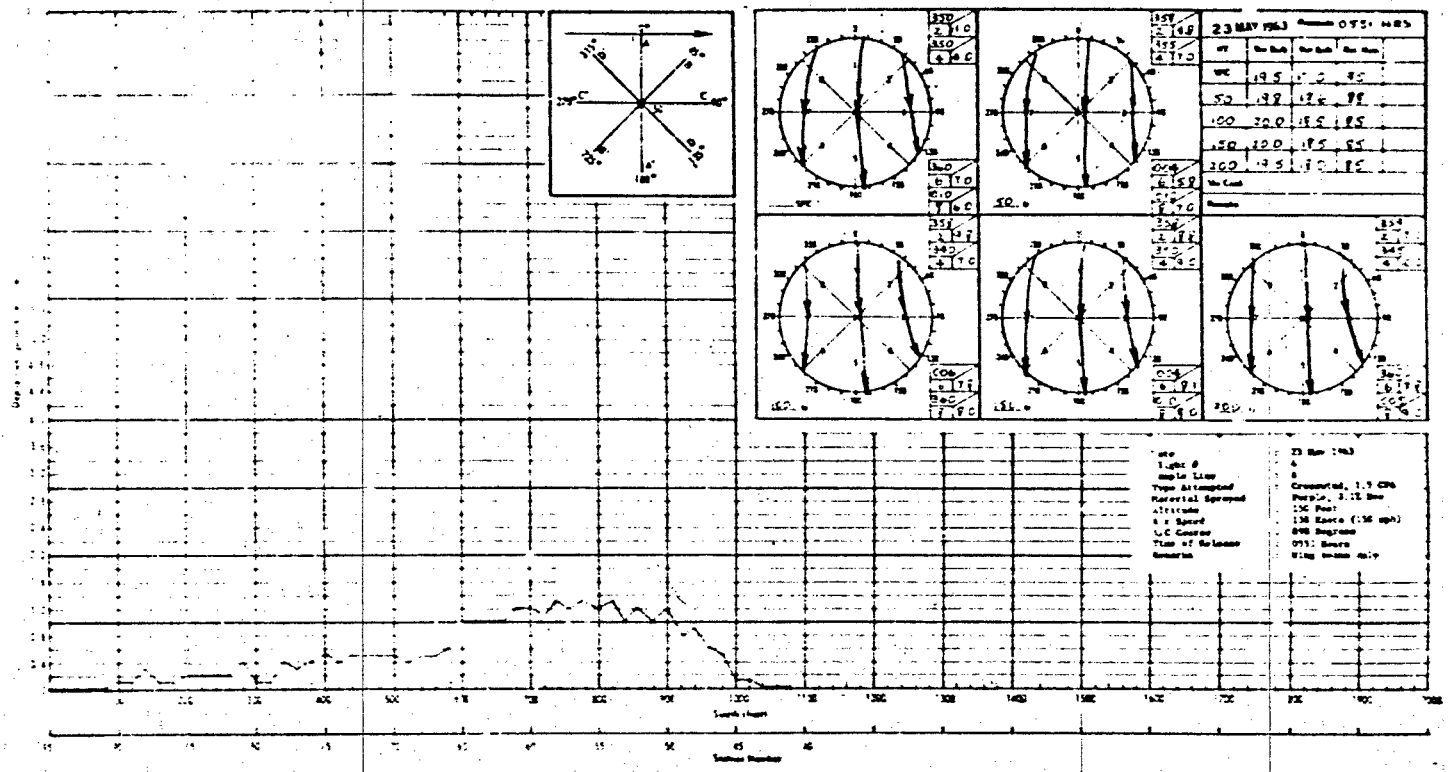
TIME OF RELEASE: 0553 hours

AIRCRAFT COURSE: 090 degrees

DURATION: 11 seconds

WIND VECTOR: 358° / 7.5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-41 blank		42	0.0	67	0.5	92	0.0
		43	0.0	68	0.5	93	0.0
		44	0.1	69	0.4	94	0.0
		45	0.1	70	0.5	95	0.0
		46	0.5	71	0.5	96	0.0
		47	0.6	72	0.5	97	0.0
		48	0.9	73	0.5	98	0.0
		49	0.8	74	0.4	99	0.0
		50	1.2	75	0.5	100	0.0
		51	1.0	76	0.4		
		52	1.2	77	0.3		
		53	1.0	78	0.4		
		54	1.3	79	0.1		
		55	1.2	80	0.1		
		56	1.3	81	0.4		
		57	1.2	82	0.2		
		58	1.3	83	0.2		
		59	1.1	84	0.2		
		60	1.2	85	0.2		
		61	1.2	86	0.1		
		62	1.0	87	0.1		
		63	1.0	88	0.3		
		64	1.0	89	0.1		
		65	1.0	90	0.1		
		66	0.6	91	0.0		



C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 22 May 1963

DATE TEST FLOWN: 24 May 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 66

NOZZLE TYPE: 3/8" check valve no tip

LIQUID TEMP: 31.3° C

DURATION OF SPRAY: 30 Sec.

PUMP PRESSURE: 26 psi during 57 psi before

PUMP R.P.M.: 2500 before 2000 during

:

NO. OF PUMPS: 1

FLOW METER READING: 205 GPM

TOTAL AMOUNT SPRAYED: 102.5 Gals.

FLOW RATE CALIBRATED: 205 GPM

NOZZLE CONFIGURATION: WING: 1-9, 14-22, 28-42
TAIL: No tail boom

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	2500	57	30	100
2	2500	57	30	210
3	2500	57	30	210
4	2500	57	30	205
5	2500	57	28	205
6	2500	57	28	210

REMARKS:

MASS MEDIAN DIAMETER

DATE: 24 May 1963

CONVERSION FACTOR: 2.5

FLIGHT #: 6

PAPER: Kromekote, white

SAMPLE LINE: B

MATERIAL: Purple

FLOW RATE: 210 GPM

SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
7	1	7600			
7	2	7300			
8	5	6700*			
8	4	6600			
8	3	6400			
8	6	6300			
8	7	6200			
8	8	6100			
9	9	6000			
9	10	5900			
9	11	5800			
9	13	5700			
9	12	5600			

$$\text{MMD} = \frac{70.44+0.1431 \text{ Spot D Max}}{\text{Con. Factor}} = \frac{70.44+0.1431(6700)}{2.5} = 411.7 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431 Max Spot = 70.44+0.1431(7600) = 1029.2 Microns

Min. Sph. Dia. = 55 Microns

MASS DEPOSIT

MATERIAL: Purple

DATE: 24 May 1963

FLIGHT #: 1

SAMPLE LINE: D

TIME OF RELEASE: 0447 hours

DURATION: 12 seconds

FLOW RATE: 100 GPM

SYSTEM: C-123/MC-1

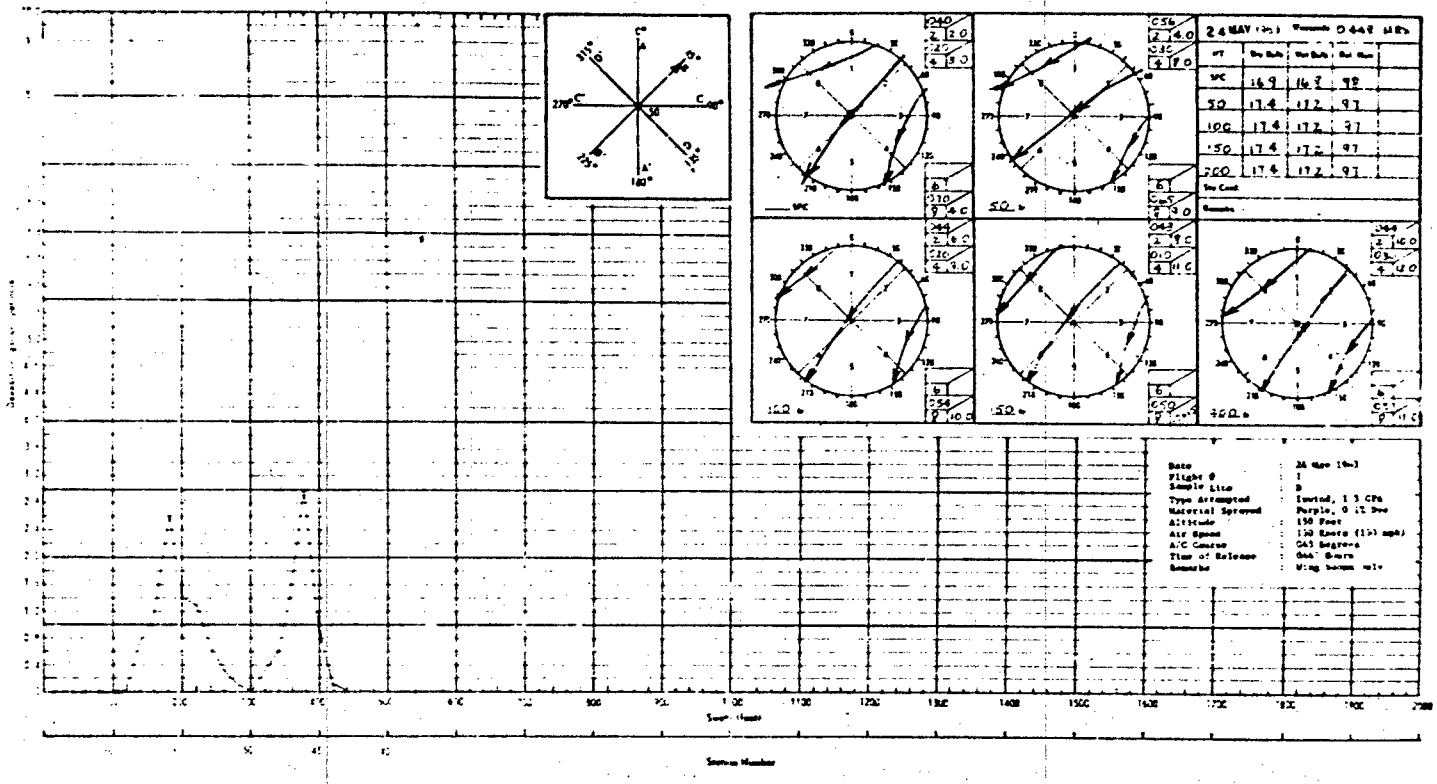
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 42° / 7.8 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-42 blank		43	0.0				
		44	0.1				
		45	0.9				
		46	3.0				
		47	1.4				
		48	0.6				
		49	0.3				
		50	0.0				
		51	0.1				
		52	0.3				
		53	0.6				
		54	1.3				
		55	1.4				
		56	2.6				
		57	1.1				
		58	0.7				
		59	0.0				
		60	0.0				
		61	0.0				
		62	0.0				
		Stations 63-100 blank					


Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
150 Feet
Sample Number

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 210 GPM

DATE: 24 May 1963

SYSTEM: C-123/MC-1

FLIGHT #. 2

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE. D

ALTITUDE: 150 feet

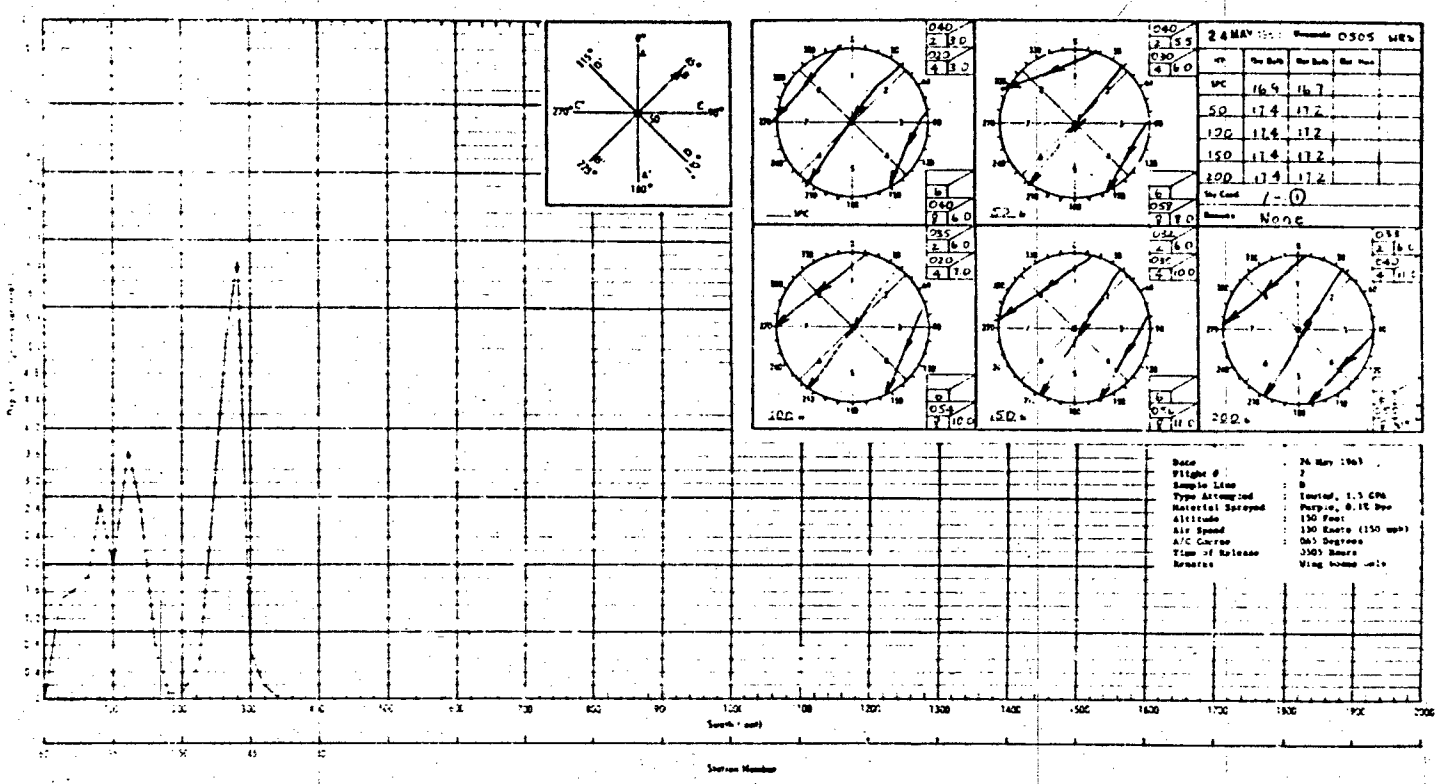
TIME OF RELEASE: 0505 hours

AIRCRAFT COURSE: 045 degrees

DURATION. 11 seconds

WIND VECTOR: 39° / 7.3 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-42 blank				43	0.0	68	0.0
				44	0.2	69	0.0
				45	0.7	70	0.0
				46	6.5	71	0.0
				47	5.3	72	0.0
				48	1.8	Stations	
				49	0.5	73-100 blank	
				50	0.1		
				51	0.1		
				52	0.8		
				53	2.9		
				54	3.7		
				55	2.0		
				56	2.9		
				57	1.8		
				58	1.6		
				59	1.[illegible]		
				60	0.0		
				61	0.0		
				62	0.0		
				63	0.0		
				64	0.0		
				65	0.0		
				66	0.0		
				67	0.0		


24 MAY
0505 WRb
SFC
50
100
150
200
None
Date
Flight #
Sample Line
Type Aircraft
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Sample Number

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 210 GPM

DATE: 24 May 1963

SYSTEM: C-123/MC-1

FLIGHT #: 3

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: D

ALTITUDE: 150 Feet

TIME OF RELEASE: 0522 Hours

AIRCRAFT COURSE: 045 Degrees

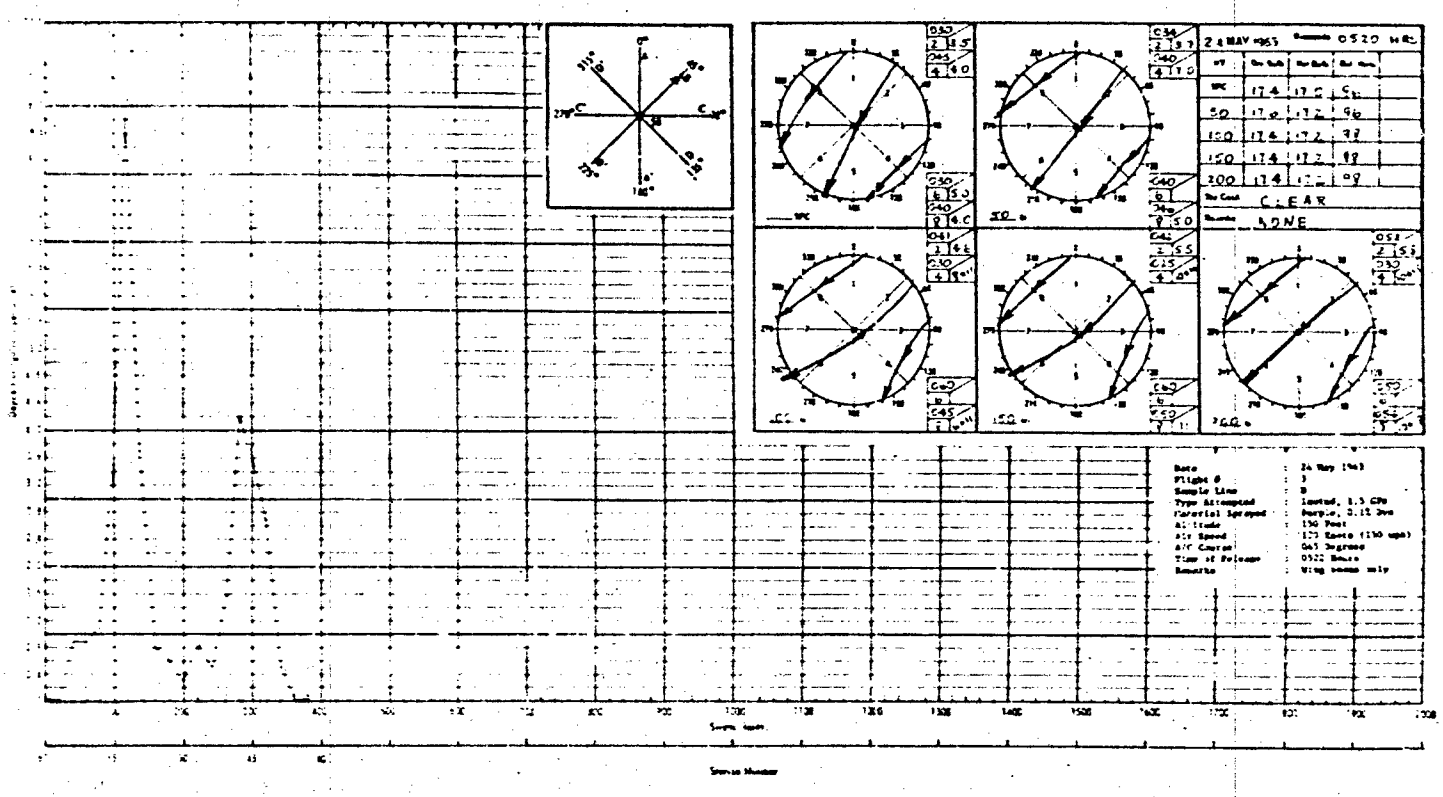
DURATION: 10 Seconds

WIND VECTOR: 43°/6.6 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-40 Blank		41	0.0	66	0.0		
		42	0.0	67	0.0		
		43	0.5	68	0.0		
		44	2.7	Stations 69-100 Blank			
		45	3.6				
		46	4.2				
		47	1.6				
		48	0.5				
		49	0.8				
		50	0.3				
		51	0.6				
		52	0.8				
		53	3.7				
		54	8.6				
		55	3.5				
		56	1.1				
		57	0.9				
		58	0.9				
		59	0.0				
		60	0.0				
		61	0.0				
		62	0.0				
		63	0.0				
		64	0.0				
		65	0.0				

$$\% \text{ Recovery} = \frac{0.202 \times 150 \times 34.3 \times 20.00}{210} = 99.0$$

Total 34.3


24 MAY 1963
0520 HRS
CLEAR
NONE

MASS DEPOSIT

MATERIAL: Purple

DATE: 24 May 1963

FLIGHT #. 4

SAMPLE LINE: D

TIME OF RELEASE. 0539 Hours

DURATION: 9 Seconds

FLOW RATE: 205 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

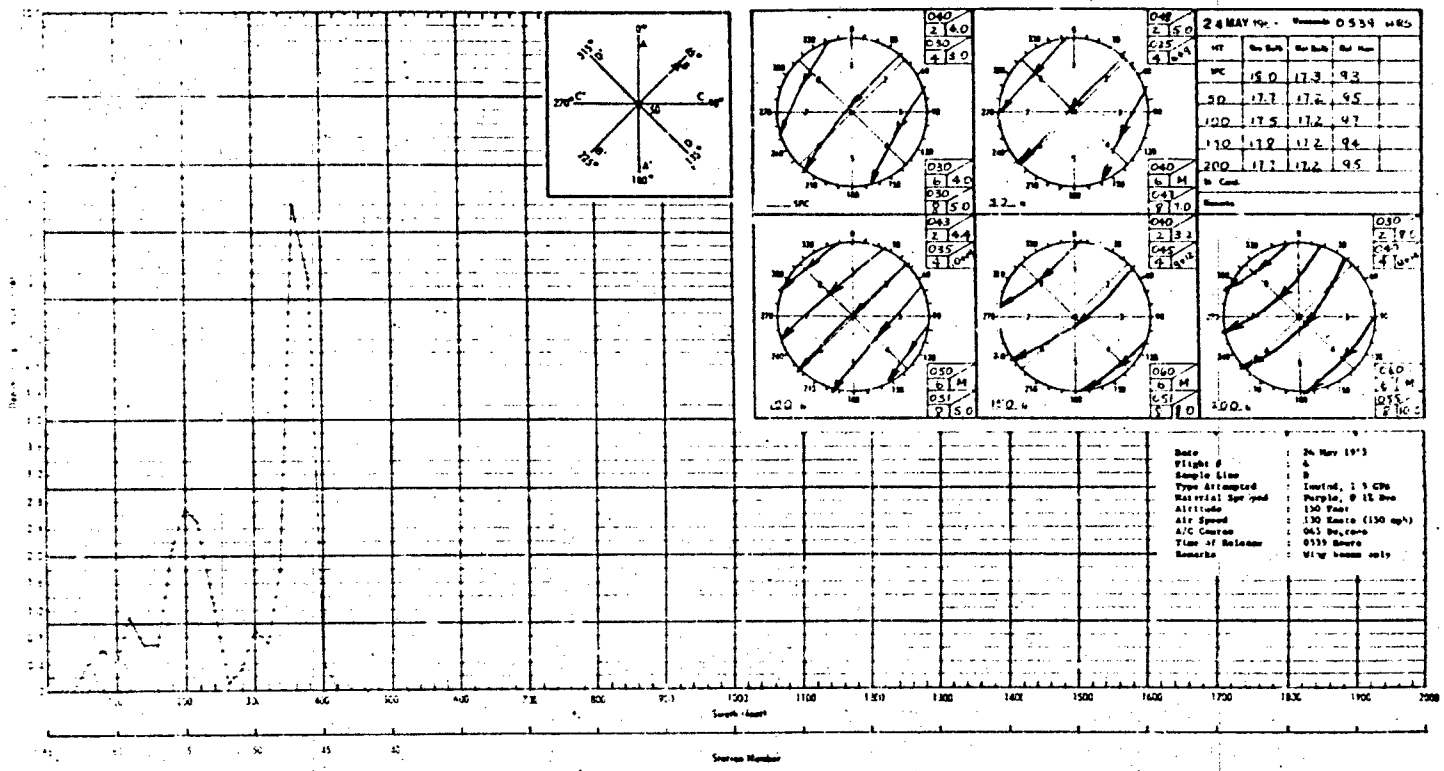
AIRCRAFT COURSE: 045 Degrees

WIND VECTOR: 044°/6.6 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-43 Blank		44	0.0				
		45	0.4				
		46	6.1				
		27	7.2				
		48	1.8				
		49	0.7				
		50	0.9				
		51	0.3				
		52	0.1				
		53	1.3				
		54	2.5				
		55	2.7				
		56	2.1				
		57	0.7				
		58	0.7				
		59	1.1				
		60	0.4				
		61	0.6				
		62	0.4				
		63	0.0				
		Stations 64-100 Blank					

$$\% \text{ Recovery} = \frac{0.202 \times 150 \times 30.0 \times 20.00}{205} = 38.7$$

Total 30.0


24 MAY
0534
Date : 24 May 1973
Flight # : 4
Sample time : 8
Type Attempted : Inverted, 1 1 CPS
Material Sprayed : Purple, 0 12 Dye
Altitude : 130 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 063 Degrees
Time of Release : 0534 Hours
Remarks : Wing boom only
Seconds Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 24 May 1953

FLIGHT #: 5

SAMPLE LINE: D

TIME OF RELEASE: 0557 hours

DURATION: 9 seconds

FLOW RATE: 205 GPM

SYSTEM: C-123/MC-1

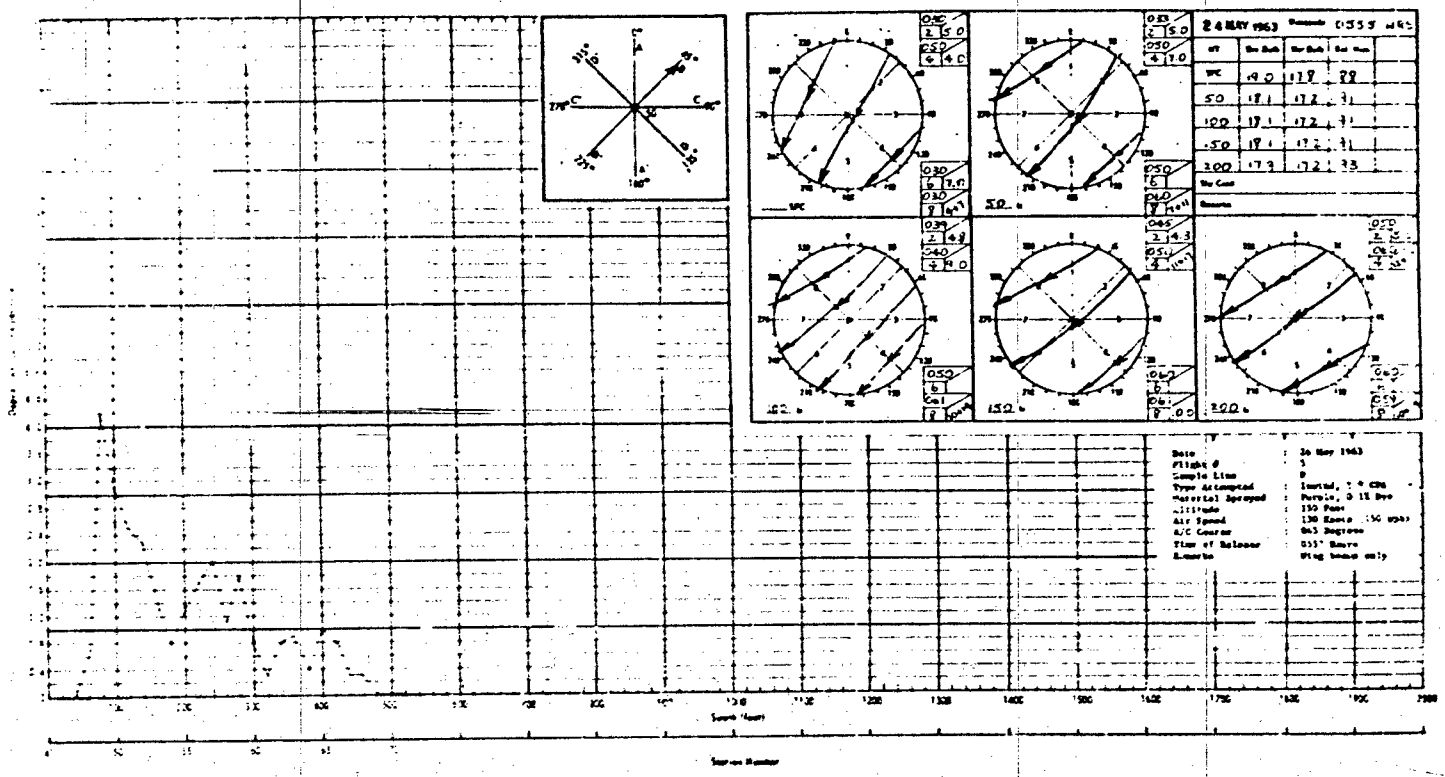
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 045 degrees

WIND VECTOR: 050° / 7.3 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-46 blank				47	0.0	72	0.0
				48	0.7	Stations	
				49	4.2	73-100	
				50	3.1	blank	
				51	2.5		
				52	2.3		
				53	1.3		
				54	0.8		
				55	1.3		
				56	1.7		
				57	2.0		
				58	1.1		
				59	1.8		
				60	0.8		
				61	0.3		
				62	0.8		
				63	0.9		
				64	0.4		
				65	1.0		
				66	0.8		
				67	0.3		
				68	0.3		
				69	0.0		
				70	0.0		
				71	0.0		


24 MAY 1963
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Sample Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 24 May 1963

FLIGHT #: 6

SAMPLE LINE: B

TIME OF RELEASE: 0615 Hours

DURATION: 12 Seconds

FLOW RATE: 210 GPM

SYSTEM: C-123/MC-1

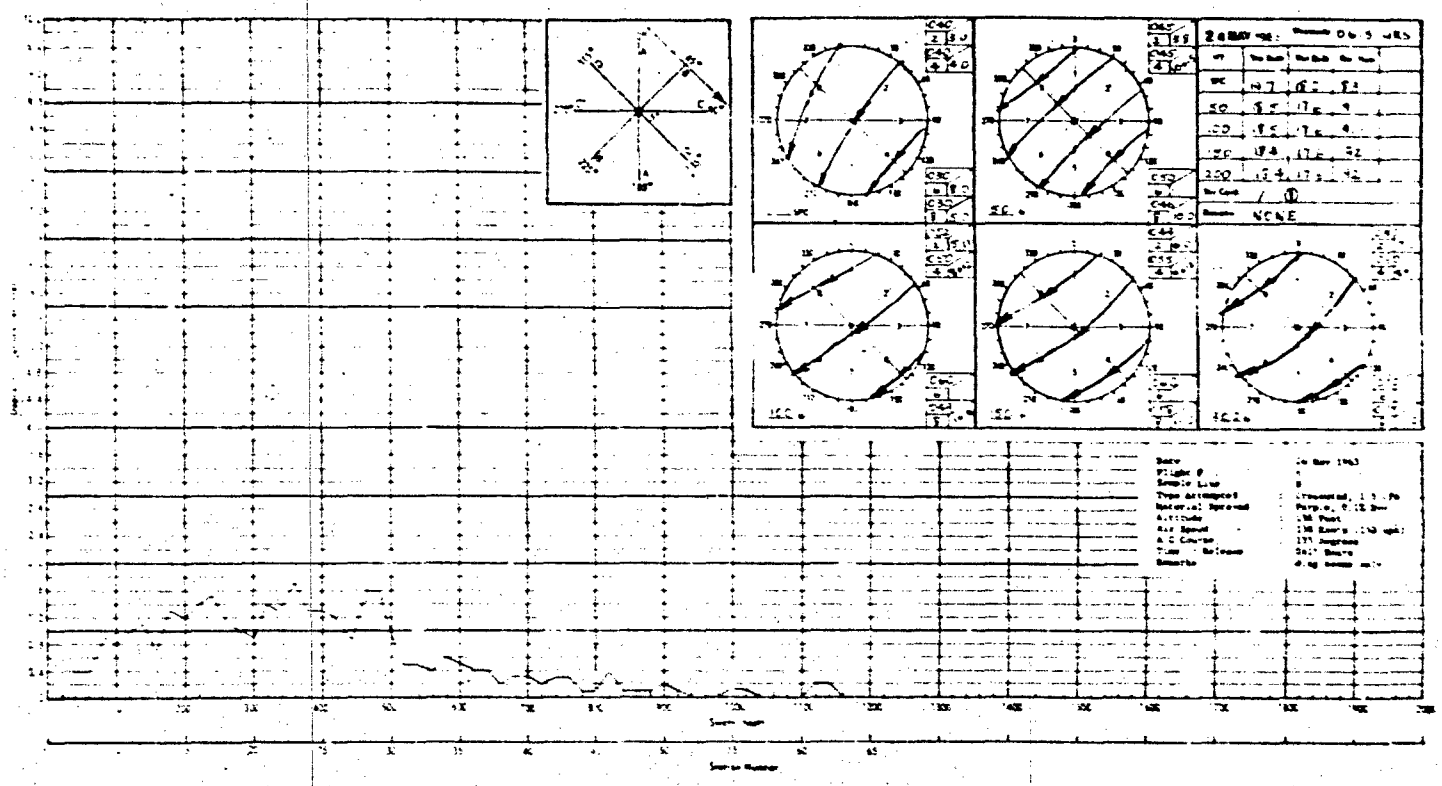
AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 135 Degrees

WIND VECTOR: 052°/7.4 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-5 Blank		26	1.2	51	0.1	76	0.0
		27	0.9	52	0.0	77	0.0
		28	1.6	53	0.0	78	0.0
		29	1.6	54	0.0	79	0.0
		30	0.9	55	0.1	80	0.0
6	0.0	31	0.5	56	0.1	81	0.0
7	0.4	32	0.5	57	0.0	82	0.0
8	0.4	33	0.4	58	0.0	83	0.0
9	0.9	34	0.6	59	0.0	84	0.0
10	0.8	35	0.5	60	0.0	85	0.0
11	1.0	36	0.4	61	0.2	86	0.0
12	1.1	37	0.4	62	0.2	87	0.0
13	0.7	38	0.2	63	0.0	88	0.0
14	1.3	39	0.3	64	0.0	89	0.0
15	1.2	40	0.3	65	0.0	90	0.0
16	1.4	41	0.2	66	0.0	91	0.0
17	1.5	42	0.3	67	0.0	92	0.0
18	1.1	43	0.3	68	0.0	93	0.0
19	1.0	44	0.1	69	0.0	94	0.0
20	0.9	45	0.1	70	0.0	95	0.0
21	1.4	46	0.4	71	0.0	96	0.0
22	1.3	47	0.1	72	0.0	97	0.0
23	1.7	48	0.1	73	0.0	98	0.0
24	1.3	49	0.1	74	0.0	99	0.0
25	1.3	50	0.2	75	0.0	100	0.0



C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 5 June 1963

DATE TEST FLOWN: 6 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 76

NOZZLE TYPE: Check valve

LIQUID TEMP:

DURATION OF SPRAY: 10 Sec.

PUMP PRESSURE: 54 psi before 32 psi during

PUMP R.P.M.: 2800 before spray

:

NO. OF PUMPS: 2

FLOW METER READING: 420 GPM

TOTAL AMOUNT SPRAYED: 70 Gals.

FLOW RATE CALIBRATED: 420 GPM

NOZZLE CONFIGURATION: WING: 1-32
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	CFM FLOWMETER
1	---	53	---	435
2	---	52	---	430

REMARKS: Boom pressures: Left wing 20#, Right wing 19#.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 5 June 1963

DATE TEST FLOWN: 6 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 76

NOZZLE TYPE: Check valve

LIQUID TEMP:

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 45 psi before 22 psi during

PUMP R.P.M.: 2500 before spray

NO. OF PUMPS: 1

FLOW METER READING: 220 GPM

TOTAL AMOUNT SPRAYED: 53.5 Gals.

FLOW RATE CALIBRATED: 220 GPM

NOZZLE CONFIGURATION: WING: 1-32
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	---	46	---	235
4	---	46	---	235

REMARKS: Boom pressures: Left wing 14#, Right wing 15#, Tail 17#.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 5 June 1963

DATE TEST FLOWN: 6 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 64

NOZZLE TYPE: Check valve

LIQUID TEMP:

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 64 psi before

PUMP R.P.M.: 3000 before spray

:

NO. OF PUMPS: 2

FLOW METER READING: 420 GPM

TOTAL AMOUNT SPRAYED: Gals.

FLOW RATE CALIBRATED:

NOZZLE CONFIGURATION: WING: 1-32
TAIL: Closed

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	---	66	---	445
6	---	54	---	445

REMARKS:

MASS MEDIAN DIAMETER

DATE: 6 June 1963

FLIGHT #: 6

SAMPLE LINE: A

FLOW RATE: 445 GPM

SPREAD FACTOR: 6.0

CONVERSION FACTOR: 2.5

PAPER: Kromekote, white

MATERIAL: Fuel Oil

SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
56	4	5000*			
53	1	4900			
56	5	4800			
56	6	4700			
56	7	4600			
53	2	4500			
53	3	4400			
54	10	4300			
54	9	4200			
54	8	4100			

$$MMD = \frac{\text{Spot D Max}}{\text{Spread Factor x Con. Factor}} = \frac{5000}{6 \times 2.5} = 333.3 \text{ Microns}$$

$$\text{Max. Sph. Dia.} = \frac{5000}{6} = 833.[illegible] \text{ microns}$$

$$\text{Min. Sph. Dia.} = \frac{100}{6} = 16.7 [illegible] \text{ microns}$$

MASS DEPOSIT

ATTITUDE: Tw 1 0'1

DATE: 5 June 1967

FLIGHT #: A

SAMPLE LINE: C

TIME OF RELEASE: 0457 hours

DURATION: 13 seconds

FLOW RATE: [illegible] GPM

SYSTEM: C-123/MC-1

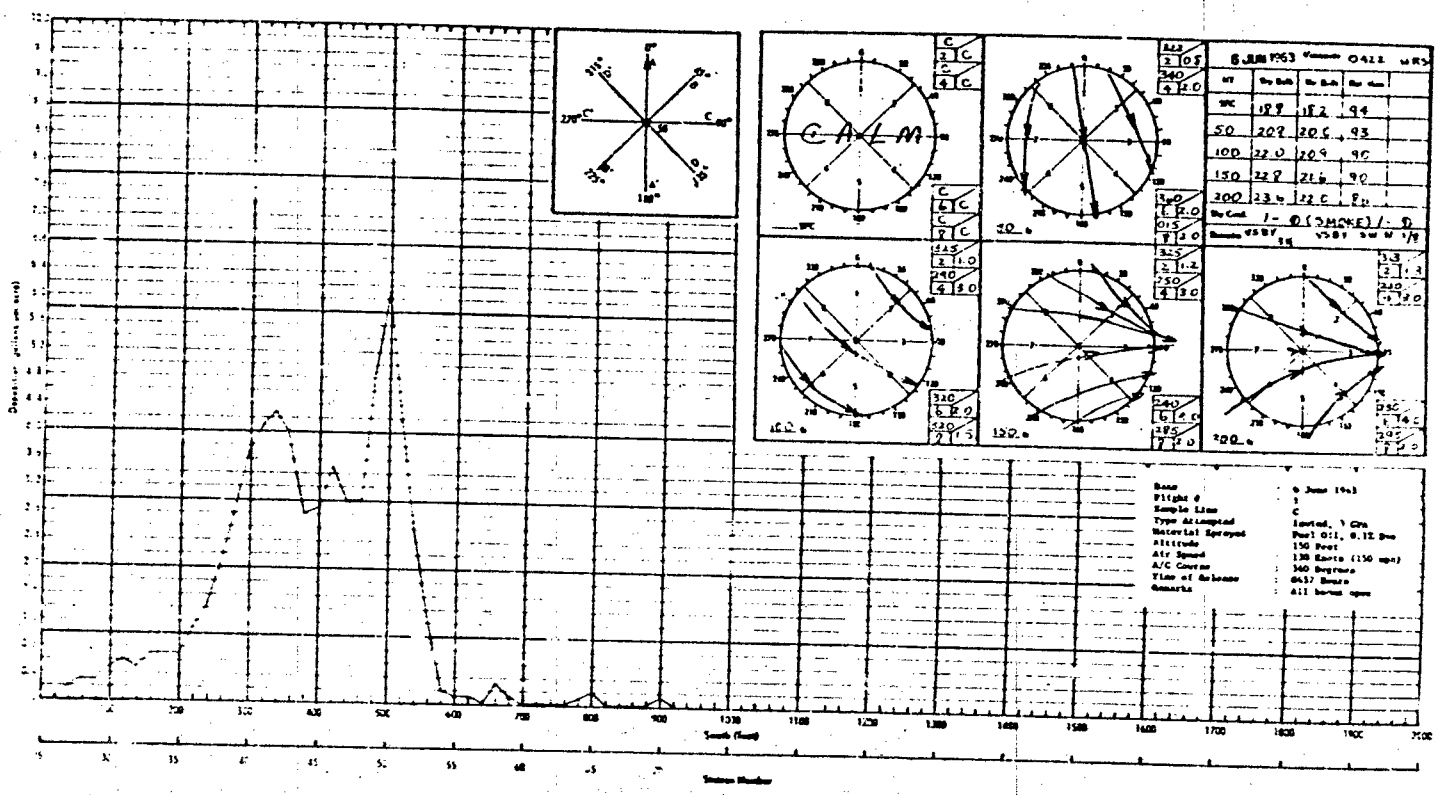
AIRSPEED: 132 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 260 degrees

WIND VECTOR: 292° / 1.9 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-25 blank		26	0.0	51	4.2		
		27	0.2	52	2.7		
		28	0.3	53	1.2		
		29	0.3	54	0.2		
		30	0.5	55	0.1		
		31	0.6	56	0.1		
		32	0.5	57	0.0		
		33	0.7	58	0.3		
		34	0.7	59	0.1		
		35	0.7	60	0.0		
		36	1.1	61	0.0		
		37	1.4	62	0.0		
		38	2.0	63	0.0		
		39	2.3	64	0.1		
		40	3.7	65	0.2		
		41	4.1	66	0.0		
		42	4.3	67	0.0		
		43	4.0	68	0.0		
		44	2.8	69	0.0		
		45	2.9	70	0.1		
		46	3.5	Stations 71-100 blank			
		47	3.0				
		48	3.0				
		49	4.9				
		50	6.1				


CALM
6 JUN 1963
Base
Flight #
Sample Line
Type Accumulant
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Fuel Oil, 0.12 Dye
150 Feet
130 Knots (150 mph)
340 Degrees
0437 Hours
All horizontal spray
Seconds (Total)
Station Number

MASS DEPOSIT

MATERIAL: Fuel 0.1

DATE: 6 June 1963

FLIGHT #: 2

STATIC LINE: [illegible]

TIME OF RELEASE: [illegible] hours

DURATION: 1 seconds

FLOW RATE: 430 GPM

SYSTEM: C-123/MC-1

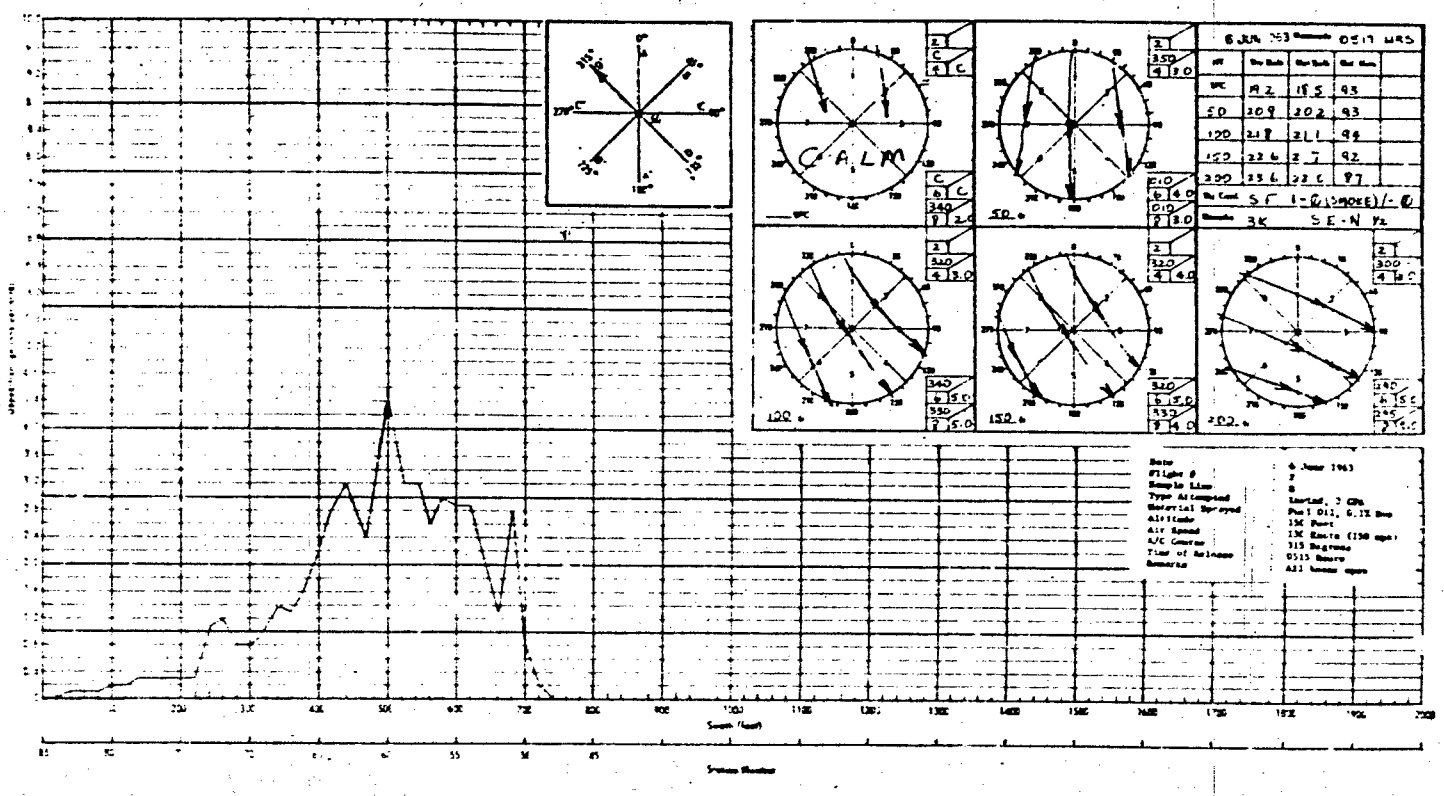
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 315 degrees

WIND VECTOR: 324° / 3.0 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-48 blank				49	0.2	74	0.3
				50	0.8	75	0.3
				51	2.8	76	0.3
				52	1.3	77	0.3
				53	2.1	78	0.3
				54	2.9	79	0.2
				55	2.9	80	0.2
				56	3.0	81	0.1
				57	2.6	82	0.1
				58	3.2	83	0.1
				59	3.2	Stations	
				60	4.4	84-100	
				61	3.0	blank	
				62	2.4		
				63	3.2		
				64	2.8		
				65	2.2		
				66	1.6		
				67	1.3		
				68	1.4		
				69	0.9		
				70	0.8		
				71	0.8		
				72	1.2		
				73	1.1		


CALM
50.0
100.0
150.0
200.0
6 JUN 1963
0517 HRS
3K
S E - N
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
6 June 1963
Sample Time
Type Attempted
Material Sprayed
Altitude
Air Speed
A/C Course
Time of Release
Remarks
Source Number

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: [illegible] June 1953

FLIGHT #: 2

SAMPLE LINE: C

TIME OF RELEASE: [illegible] hours

DURATION: 15 seconds

FLOW RATE: 235 GPM

SYSTEM: C-123/MC-1

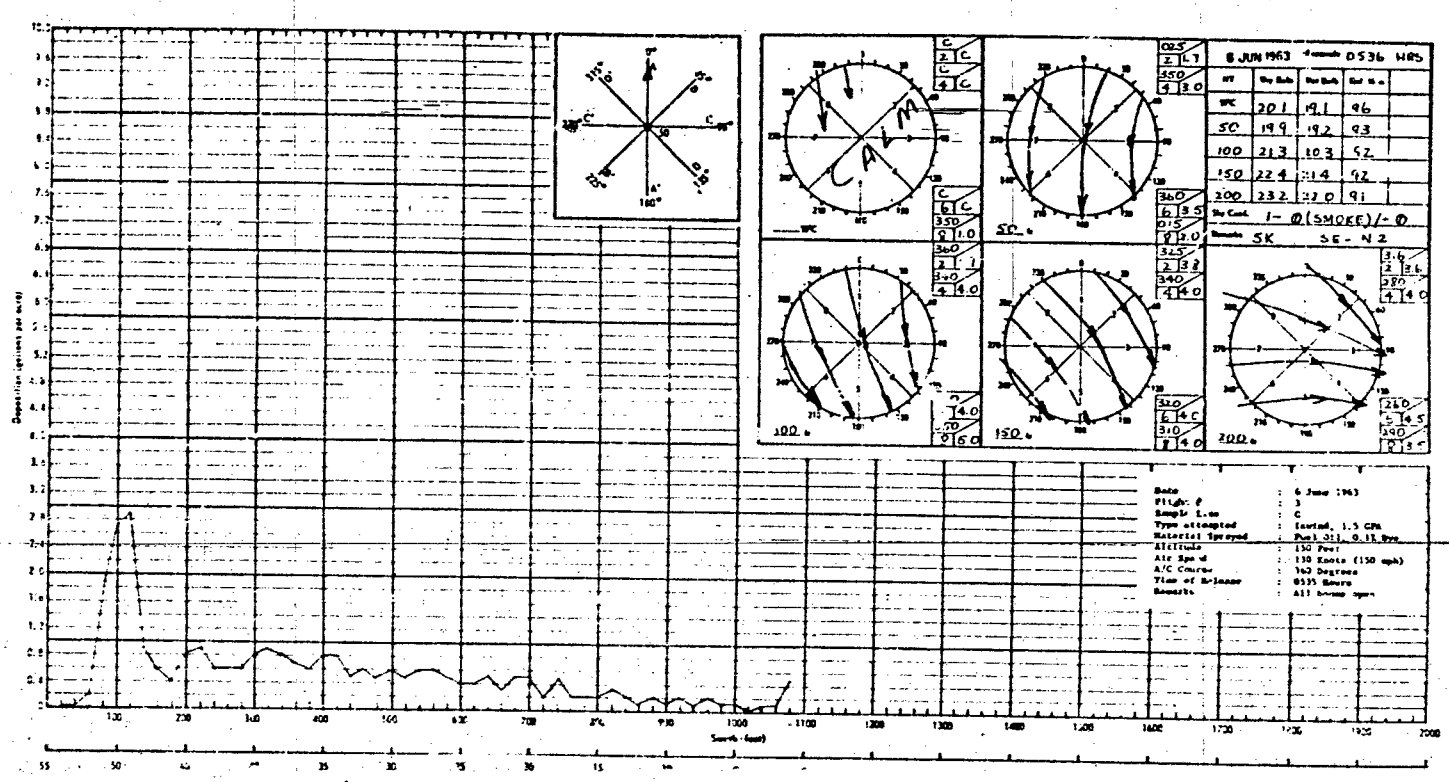
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 360 degrees

WIND VECTOR: 327° / 3.0 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.5	26	0.5	51	1.9		
2	0.2	27	0.6	52	0.2		
3	0.2	28	0.6	53	0.0		
4	0.0	29	0.5	54	0.0		
5	0.1	30	0.6	Stations 55-100 blank			
6	0.1	31	0.5				
7	0.2	32	0.6				
8	0.1	33	0.5				
9	0.2	34	0.8				
10	0.1	35	0.8				
11	0.2	36	0.6				
12	0.1	37	0.7				
13	0.2	38	0.8				
14	0.3	39	0.9				
15	0.2	40	0.8				
16	0.2	41	0.6				
17	0.2	42	0.6				
18	0.5	43	0.6				
19	0.2	44	0.9				
20	0.5	45	0.8				
21	0.5	46	0.4				
22	0.5	47	0.6				
23	0.5	48	0.9				
24	0.4	49	2.9				
25	0.4	50	2.7				


Deposition (gallons per acre)
Downwind (feet)
CALM
8 JUN 1963
0536 HRS
SC
100
150
200
Date : 6 June 1963
Flight # : 3
Sample Line : C
Type attempted : Instant. 1.5 GPA
Material Sprayed : Fuel Oil, 0.15 Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 360 Degrees
Time of Release : 0535 Hours
Remarks : All boxes open

MASS DEPOSIT

MATERIAL: Fuel Oil

FLOW RATE: 2

DATE: 6 June 1963

SYSTIM: C-123

FLIGHT #: 4

AIRSPEED: 130 kt

SAMPLE LINE: C

ALTITUDE: 150

TIME OF RELEASE: 0553 hours

AIRCRAFT COURSE:

DURATION: 13 seconds

WIND VECTOR: 31

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-12 blank		13	0.1	38	1.0
		14	0.1	39	1.2
		15	0.1	40	1.2
		16	0.1	41	1.1
		17	0.1	42	0.7
		18	0.2	43	0.7
		19	0.2	44	0.7
		20	0.2	45	0.8
		21	0.2	46	0.8
		22	0.2	47	1.3
		23	0.3	48	2.8
		24	0.3	49	1.6
		25	0.3	50	2.8
		26	0.4	51	2.6
		27	0.4	52	0.5
		28	0.5	53	0.5
		29	0.5	Stations 54-100	
		30	0.6		
		31	0.6		
		32	0.8		
		33	0.8		
		34	0.7		
		35	0.7		
		36	0.7		
		37	0.7		

MASS DEPOSIT

MATERIAL: Fuel Oil

FLOW RATE: 235 GPM

DATE: 6 June 1963

SYSTEM: C-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 feet

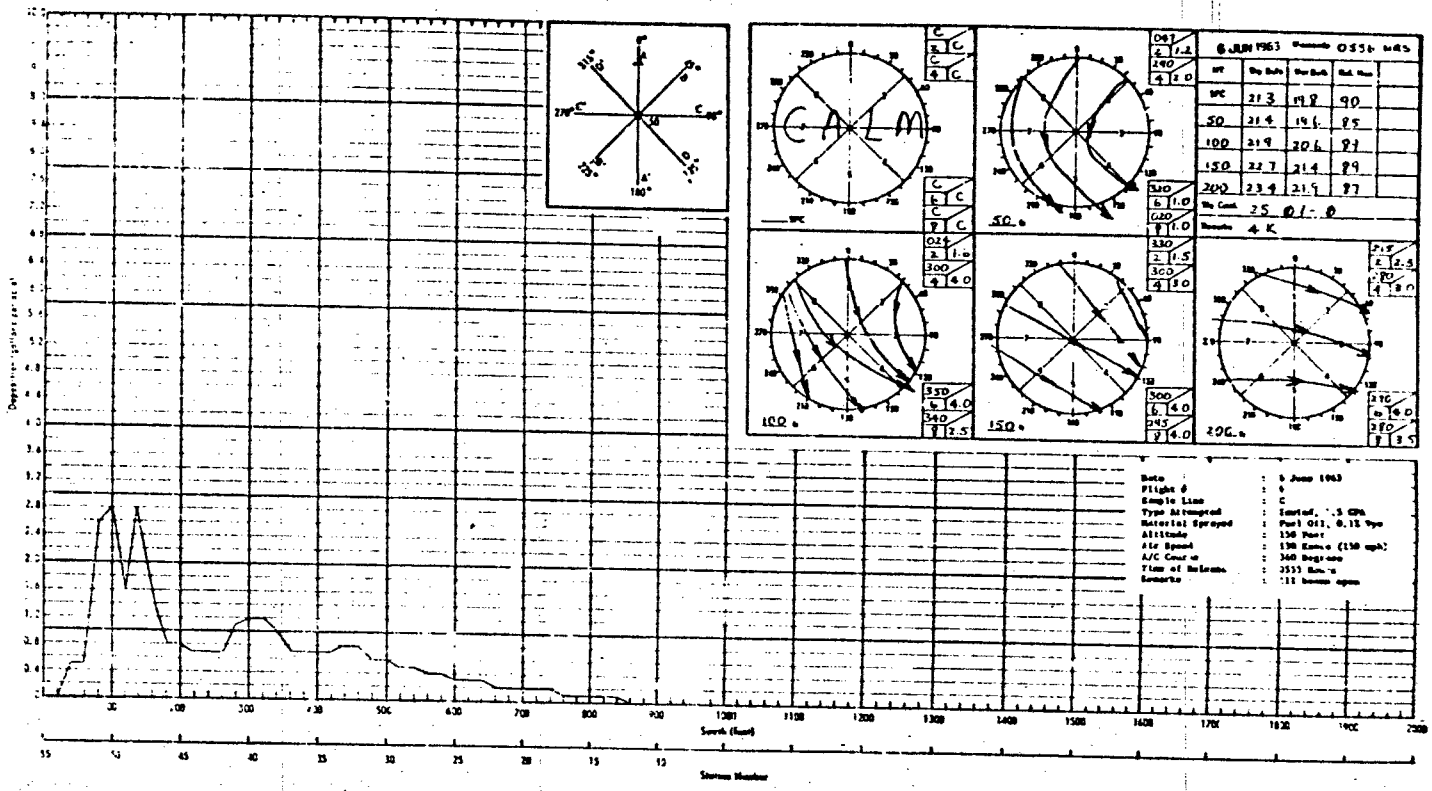
TIME OF RELEASE: 0553 hours

AIRCRAFT COURSE: 360 degrees

DURATION: 13 seconds

WIND VECTOR: 314° / 2.4 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-12 blank		13	0.1	38	1.0		
		14	0.1	39	1.2		
		15	0.1	40	1.2		
		16	0.1	41	1.1		
		17	0.1	42	0.7		
		18	0.2	43	0.7		
		19	0.2	44	0.7		
		20	0.2	45	0.8		
		21	0.2	46	0.8		
		22	0.2	47	1.3		
		23	0.3	48	2.8		
		24	0.3	49	1.6		
		25	0.3	50	2.8		
		26	0.4	51	2.6		
		27	0.4	52	0.5		
		28	0.5	53	0.5		
		29	0.5	Stations 54-100 blank			
		30	0.6				
		31	0.6				
		32	0.8				
		33	0.8				
		34	0.7				
		35	0.7				
		36	0.7				
		37	0.7				


CALM
6 JUN 1963
Search (feet)
Station Number

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 6 June 1963

FLIGHT #: 5

SAMPLE LINE: C

TIME OF RELEASE 0610 hours

DURATION: 10 seconds

FLOW RATE: 445 GPM

SYSTEM: C-123/MC-1

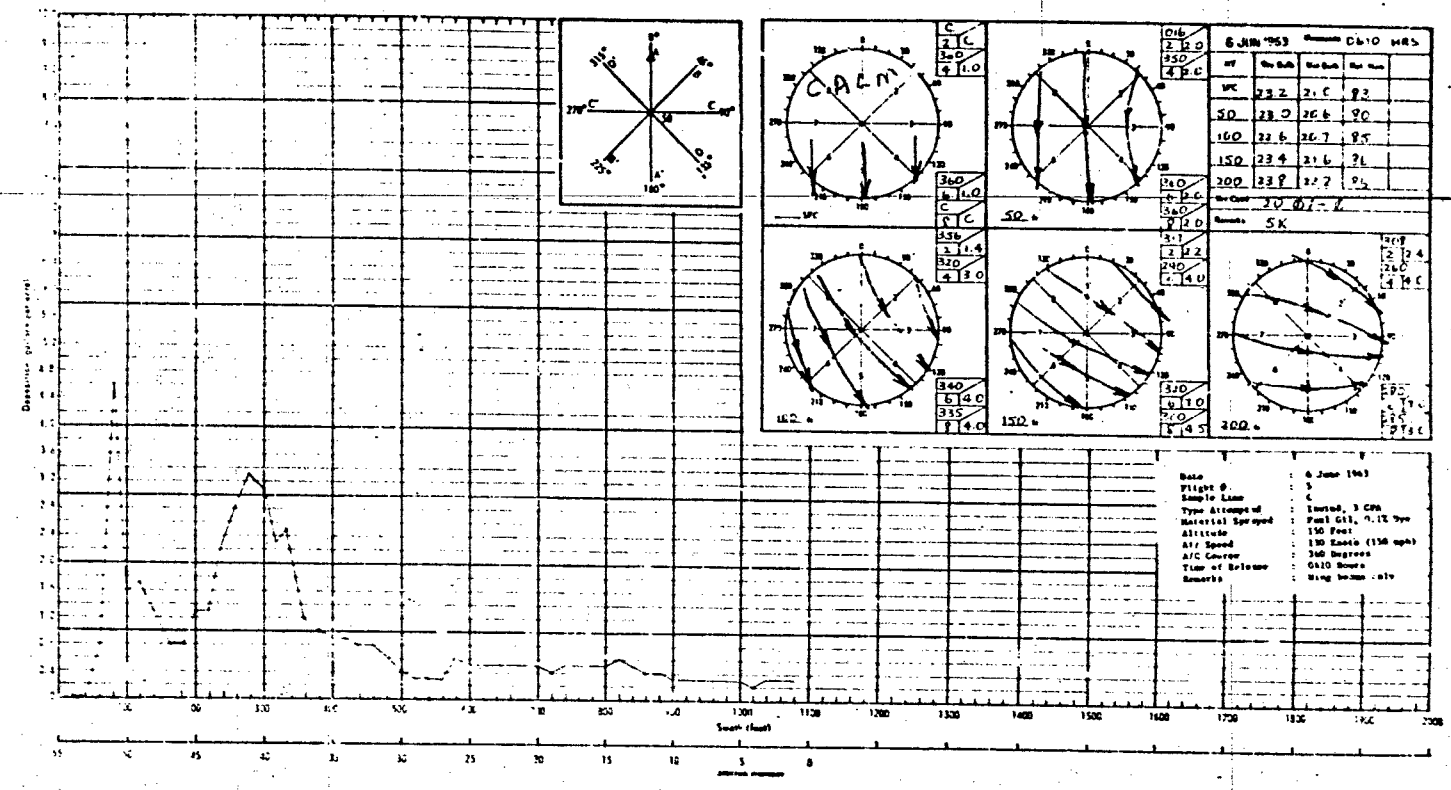
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 360 degrees

WIND VECTOR: 315° / 2.5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.3	26	0.6	51	4.6		
2	0.3	27	0.3	52	0.8		
3	0.3	28	0.3	53	0.2		
4	0.2	29	0.3	Stations 54-100 blank			
5	0.3	30	0.4				
6	0.3	31	0.6				
7	0.3	32	0.8				
8	0.3	33	0.8				
9	0.3	34	0.9				
10	0.3	35	0.9				
11	0.4	36	1.0				
12	0.4	37	1.2				
13	0.5	38	2.5				
14	0.6	39	2.3				
15	0.5	40	3.1				
16	0.5	41	3.3				
17	0.5	42	2.8				
18	0.5	43	2.2				
19	0.4	44	1.3				
20	0.5	45	1.3				
21	0.5	46	0.8				
22	0.5	47	0.8				
23	0.5	48	1.3				
24	0.5	49	1.7				
25	0.5	50	1.0				


CALM
6 JUN 1953
0610 HRS
Date : 6 June 1953
Flight # : 3
Sample Line : C
Type Attempted : Swathed, 3 GPM
Material Sprayed : Fuel Oil, 9.1% Tye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 360 Degrees
Time of Release : 0610 Hours
Remarks : Wing boom only

MASS DEPOSIT

MATERIAL: Fuel Oil

FLOW RATE: 445 GPM

DATE: 6 June 1963

SYSTEM: C-123, MC-1

FLIGHT #: 6

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 Feet

TIME OF RELEASE: 0632 Hours

AIRCRAFT COURSE: 000 Degrees

DURATION: 13 Seconds

WIND VECTOR: 3[illegible]1°/3.[illegible] mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-53 Blank						76	1.4
						77	1.0
						78	1.0
				54	0.4	79	0.7
				55	0.7	80	0.9
				56	0.9	81	0.9
				57	1.7	82	0.9
				58	1.4	83	0.9
				59	1.5	84	0.9
				60	1.6	85	1.0
				61	1.7	86	0.7
				62	2.3	87	1.0
				63	2.8	88	0.9
				64	2.5	89	0.7
				65	2.5	90	0.7
				66	3.0	91	0.6
				67	3.0	92	0.5
				68	*	93	0.4
				69	1.5	94	0.4
				70	1.1	95	0.5
				71	1.0	96	0.4
				72	0.9	98	0.4
				73	1.0	98	0.5
				74	1.5	99	0.4
				75	1.5	100	0.4

* Not sprayed

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 9 June 1963

DATE TEST FLOWN: 11 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 76

NOZZLE TYPE: Check valve

LIQUID TEMP: 33° C

DURATION OF SPRAY: 10 Sec.

PUMP PRESSURE: 55 psi before 32 psi during

PUMP R.P.M.: 2800 before spray

NO. OF PUMPS: 2

FLOW METER READING: 420 GPM

TOTAL AMOUNT SPRAYED: 69.5 Gals.

FLOW RATE CALIBRATED: 417 GPM

NOZZLE CONFIGURATION: WING: 1-12
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	2900	56	33	435

REMARKS: Boom pressures: Left wing 20#, Right wing 20#, Tail 22#.

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 11 June 1963

FLIGHT #: 7

SAMPLE LINE: A

TIME OF RELEASE: 0538 hours

DURATION: 11 seconds

FLOW RATE: 435 GPM

SYSTEM: C-123/

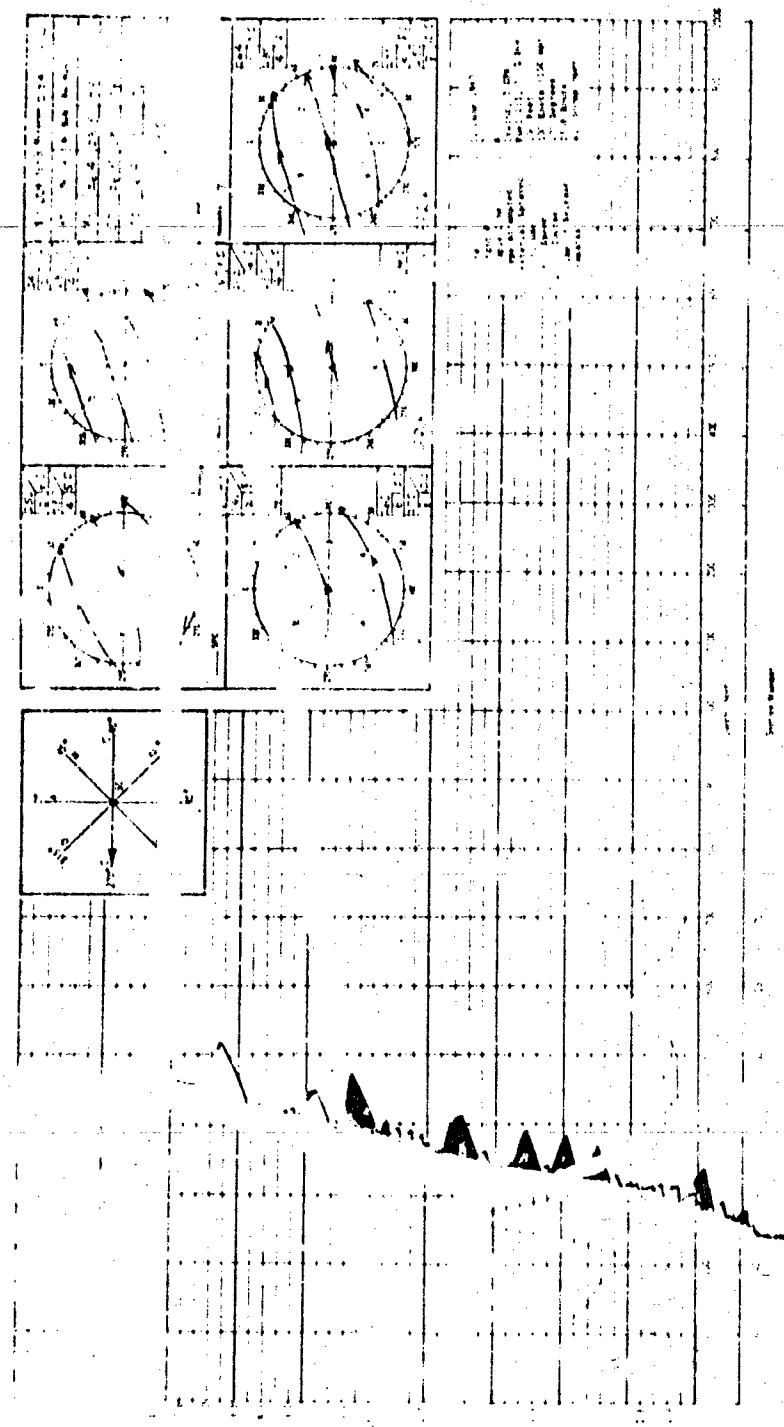
AIRSPEED: 130 knot

ALTITUDE: 150 feet

AIRCRAFT COURSE: degrees

WIND VECTOR: 252

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-19 blank		20	0.2	45	1.0		
		21	0.3	46	1.4		
		22	0.3	47	1.5		
		23	0.6	48	1.6		
		24	0.8	49	1.9		
		25	1.1	50	0.4		
		26	0.9	51	0.3		
		27	0.7	Stations 52-100 blank			
		28	0.9				
		29	0.4				
		30	0.3				
		31	0.3				
		32	0.3				
		33	0.3				
		34	0.5				
		35	0.5				
		36	0.7				
		37	1.0				
		38	1.4				
		39	2.2				
		40	2.0				
		41	3.0				
		42	3.0				
		43	1.9				
		44	1.2				



C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 June 1963

DATE TEST FLOWN: 13 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 76

NOZZLE TYPE: Check valve no tip

LIQUID TEMP: 33° C

DURATION OF SPRAY: 10 Sec.

PUMP PRESSURE: 55 psi before, 32 psi during

PUMP R.P.M.: 2800

NO. OF PUMPS: 2

FLOW METER READING: 420 GPM

TOTAL AMOUNT SPRAYED: 69.5 Gals.

FLOW RATE CALIBRATED: 417 GPM

NOZZLE CONFIGURATION: WING: 1-32
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM BEFORE	RPM DURING	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3000	2600	60	34	455
2	3000	2500	No. 1 54	33	430
			No. 2 53	30	
6	2850	2500	51	32	425

REMARKS: Boom pressure: Left wing 20#, Right wing 20#, Tail 22#. Due to vibrations pump pressure could not be controlled to specified pressures.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 June 1963

DATE TEST FLOWN: 13 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN. 76

NOZZLE TYPE: Check valve no tip

LIQUID TEMP: 33° C

DURATION OF SPRAY: 10 Sec.

PUMP PRESSURE: 46 psi before 22 psi during

PUMP R.P.M.: 2500

:

NO. OF PUMPS: 1

FLOW METER READING: 230 GPM

TOTAL AMOUNT SPRAYED: 36.5 Gals.

FLOW RATE CALIBRATED: 219 GPM

NOZZLE CONFIGURATION: WING: 1-32
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM BEFORE	RPM DURING	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	2700	2300	47	22	240
4	2600	2000	45	22	230

REMARKS: Boom pressure: Left wing 13#, Tail 17#.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 June 1963

DATE TEST FLOWN: 13 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 64

NOZZLE TYPE: Check valve no tip

LIQUID TEMP: 33° C

DURATION OF SPRAY: 10 Sec.

PUMP PRESSURE: 65 psi before 40 psi during

PUMP R.P.M.: 3200

:

NO. OF PUMPS: 2

FLOW METER READING: 420 GPM

TOTAL AMOUNT SPRAYED: 69 Gals.

FLOW RATE CALIBRATED: 414 GPM

NOZZLE CONFIGURATION: WING: 1=32
TAIL:

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM BEFORE	RPM DURING	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	3200		No. 1 65	40	455
			No. 2 67	40	

REMARKS: Boom pressure: Left wing 23#, Right wing 23#.

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 13 June 1963

FLIGHT #: 1

SAMPLE LINE: C

TIME OF RELEASE: 0500 Hours

DURATION: 18 Seconds

FLOW RATE: 455 GPM

SYSTEM: C-123/MC-1

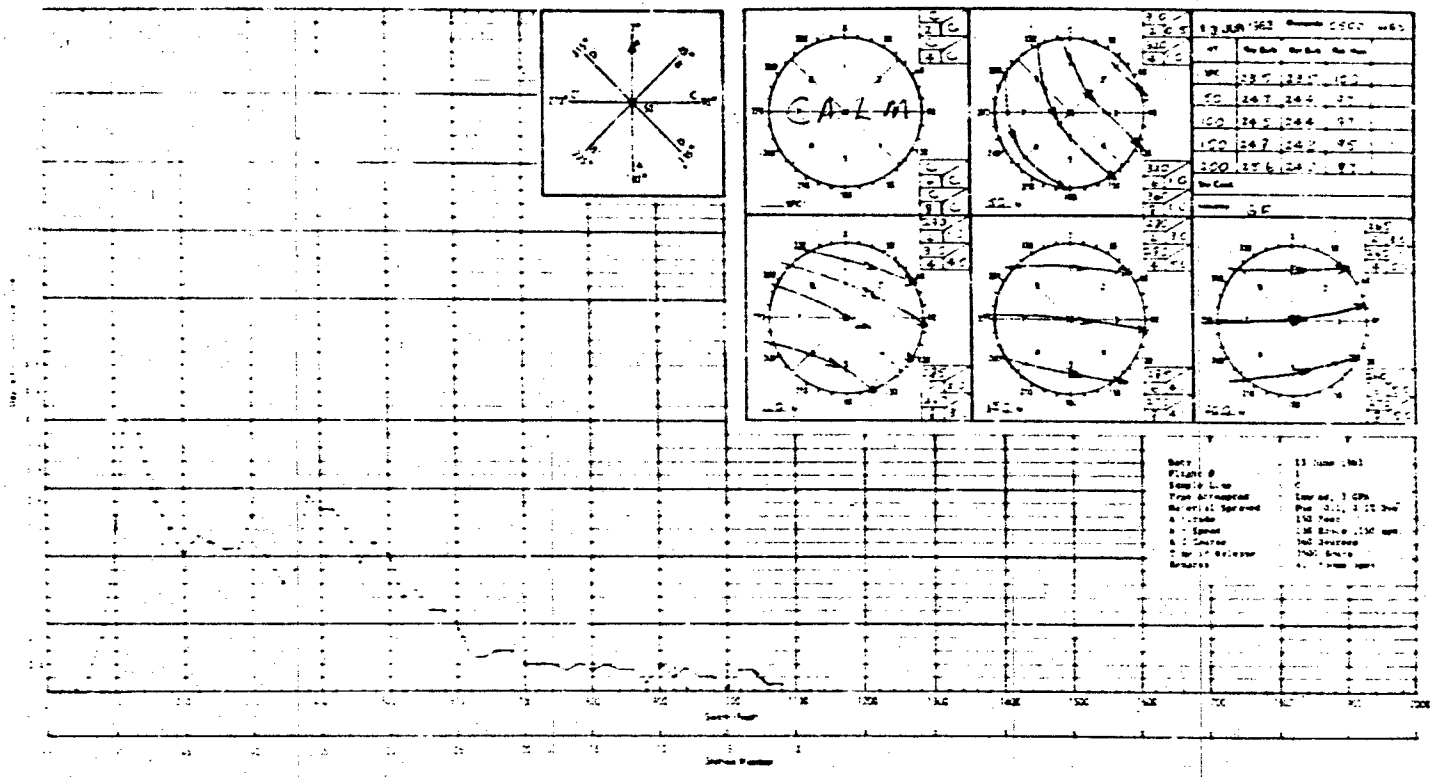
AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 360 Degrees

WIND VECTOR: 279°/2.3 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.1	26	1.2	51	0.8		
2	0.1	27	1.2	52	0.2		
3	0.3	28	1.5	53	0.0		
4	0.3	29	1.4	Stations 54-100 Blank			
5	0.0	30	2.0				
6	0.2	31	2.2				
7	0.2	32	1.9				
8	0.3	33	2.5				
9	0.2	34	2.7				
10	0.4	35	2.7				
11	0.1	36	2.9				
12	0.3	37	1.8				
13	0.3	38	1.6				
14	0.4	39	2.0				
15	0.3	40	2.6				
16	0.4	41	2.1				
17	0.3	42	2.1				
18	0.4	43	2.2				
19	0.4	44	2.3				
20	0.4	45	2.0				
21	0.6	46	2.4				
22	0.6	47	2.8				
23	0.5	48	3.8				
24	0.5	49	4.0				
25	1.0	[illegible]	[illegible]				


CALM

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 12 June 1963

FLIGHT #: 2

SAMPLE LINE: B

TIME OF RELEASE: .0520 hours

DURATION: 10 seconds

FLOW RATE: 430 GPM

SYSTEM: C-123/MC-1

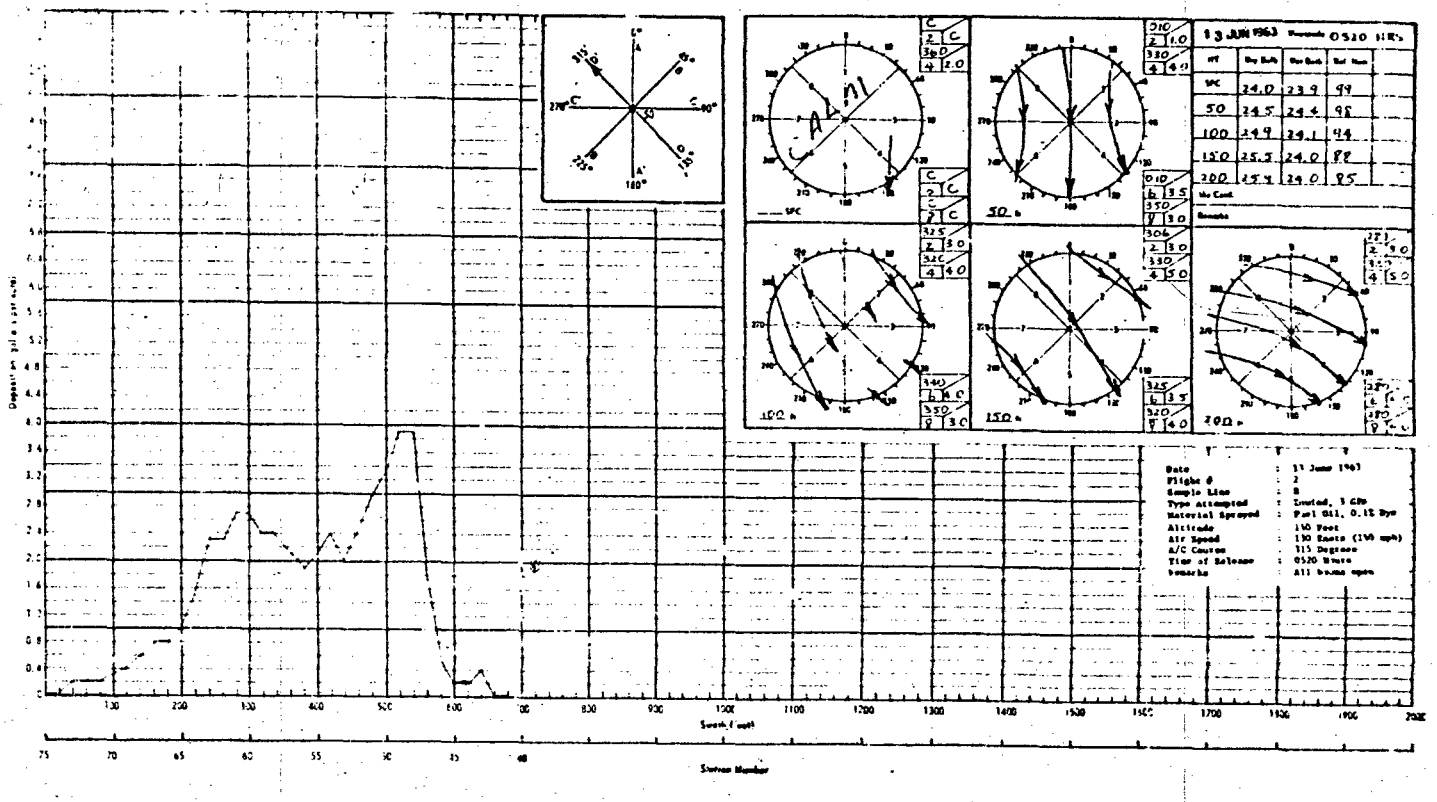
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 315 degrees

WIND VECTOR: 323° / 2.7 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-42 blank				43	0.3	68	0.6
				44	0.2	69	0.4
				45	0.2	70	0.3
				46	0.5	71	0.2
				47	1.9	72	0.2
				48	3.9	73	0.2
				49	3.9	Stations	
				50	3.3	74-100	
				51	3.0	blank	
				52	2.4		
				53	2.0		
				54	2.4		
				55	2.1		
				56	1.9		
				57	2.1		
				58	2.4		
				59	2.4		
				60	2.7		
				61	2.7		
				62	2.3		
				63	2.3		
				64	1.5		
				65	1.0		
				66	0.8		
				67	0.8		


13 JUN 1963
0520 HRS
Date : 13 June 1963
Flight # : 2
Sample Line : 8
Type Attempted : Inverted, 5 GPM
Material Sprayed : Fuel Oil, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 315 Degrees
Time of Release : 0520 Hours
Remarks : All beams open
Swath (feet)
Swath Number

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 13 June 1963

FLIGHT #: 3

SAMPLE LINE: C

TIME OF RELEASE: 0542 hours

DURATION: 19 seconds

FLOW RATE: 240 GPM

SYSTEM: C-123/MC-1

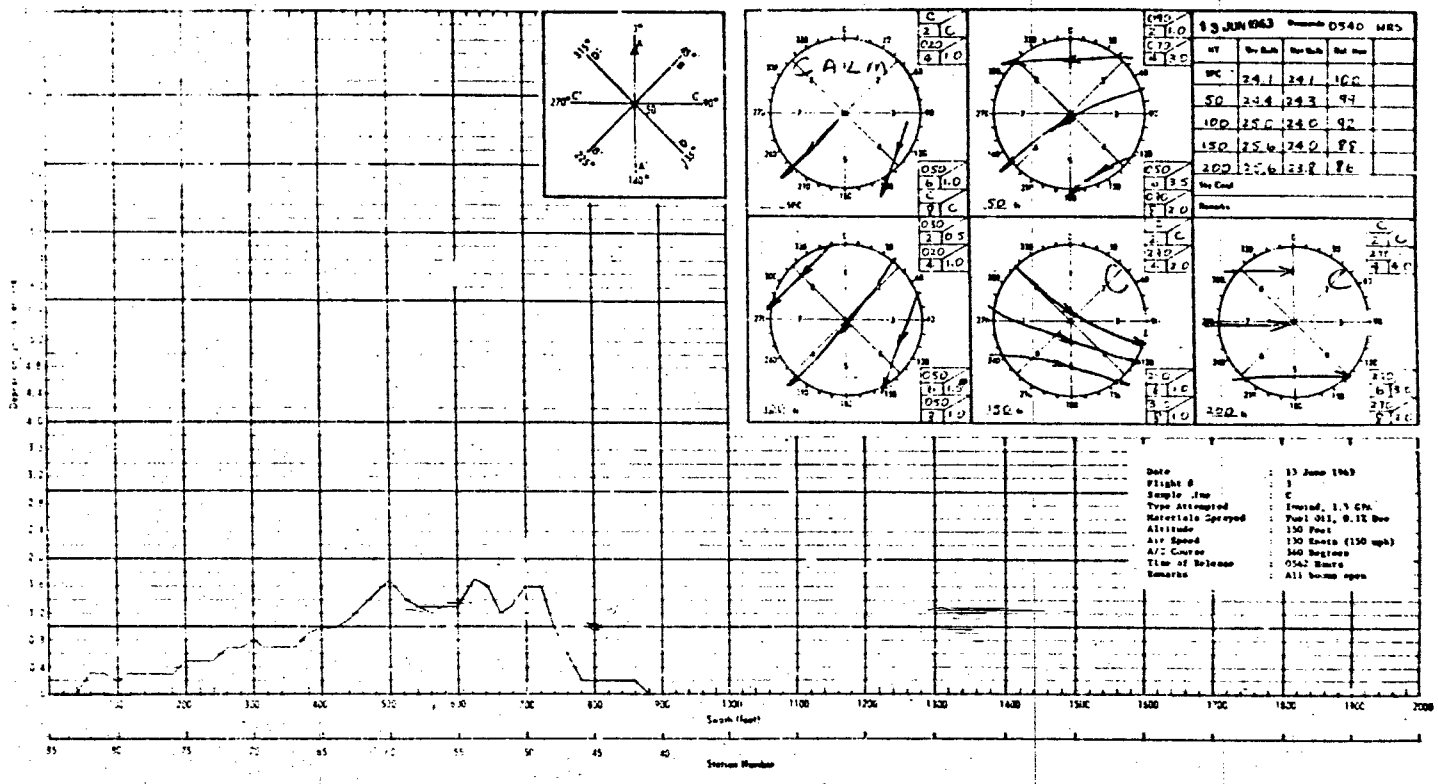
AIRSPEED: 130 knots (150 mph)

ALTITUDE: 150 feet

AIRCRAFT COURSE: 360 degrees

WIND VECTOR: 016° / 0.5 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-41 blank		42	0.2	67	0.7		
		43	0.2	68	0.7		
		44	0.2	69	0.7		
		45	0.2	70	0.8		
		46	0.2	71	0.7		
		47	0.5	72	0.7		
		48	1.0	73	0.5		
		49	1.6	74	0.5		
		50	1.6	75	0.5		
		51	1.3	76	0.3		
		52	1.2	77	0.3		
		53	1.6	78	0.3		
		54	1.7	79	0.3		
		55	1.3	80	0.2		
		56	1.3	81	0.3		
		57	1.2	82	0.3		
		58	1.3	Stations 83-100 blank			
		59	1.4				
		60	1.7				
		61	1.5				
		62	1.3				
		63	1.1				
		64	1.0				
		65	1.0				
		66	0.9				


13 JUN 1963
0540 HRS
CALM
Date : 13 June 1963
Flight # : 3
Sample line : C
Type Attempted : Ground, 1.5 GPA
Materials Sprayed : Fuel Oil, 0.1% Dye
Altitude : 150 Feet
Air Speed : 130 Knots (150 mph)
A/C Course : 360 Degrees
Time of Release : 0542 Hours
Remarks : All boxes open
South (feet)
Station Number

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 13 June 1963

FLIGHT #: 4

SAMPLE LINE: D

TIME OF RELEASE: 0601 Hours

DURATION: 13 Seconds

FLOW RATE: 230 GPM

SYSTEM: C-123/MC-1

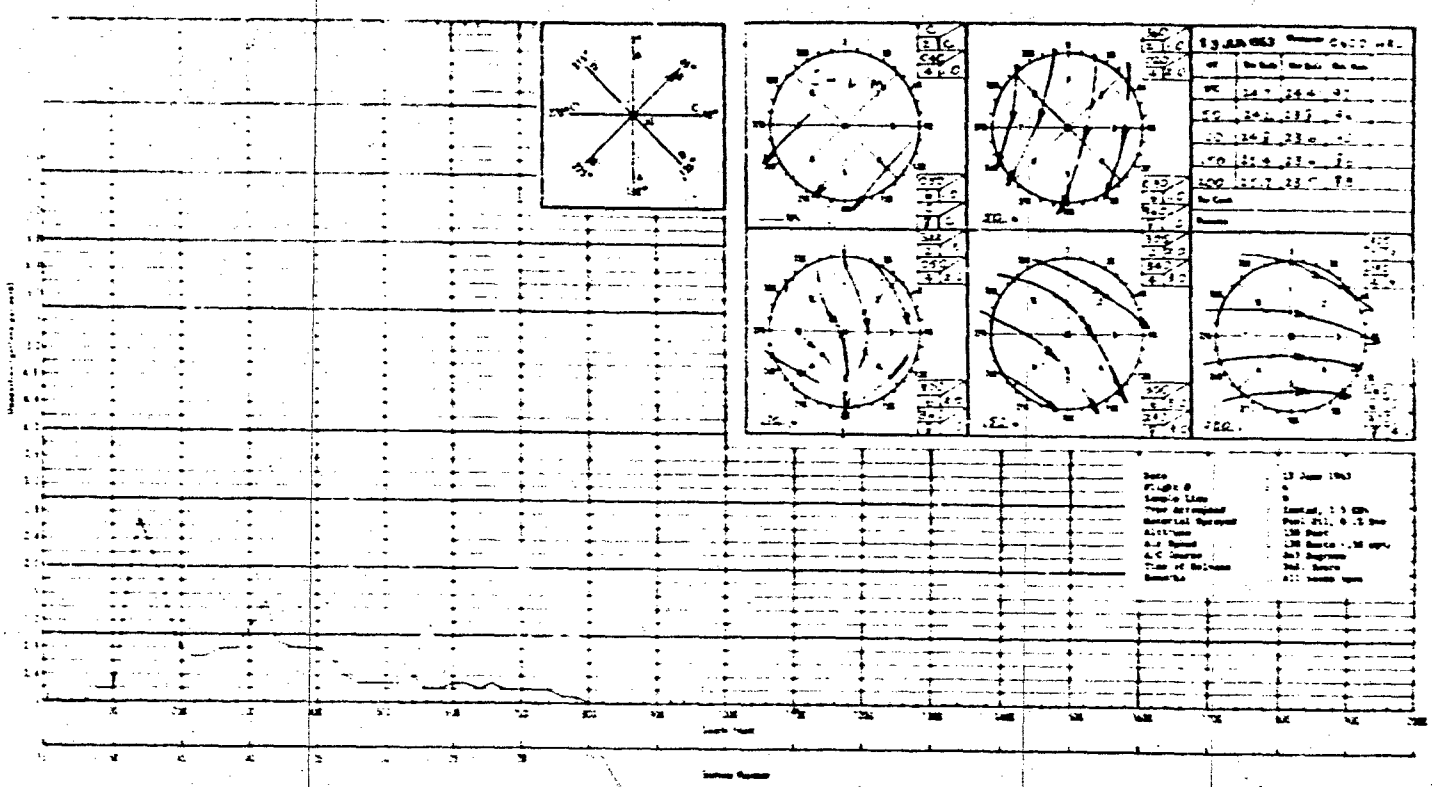
AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR: 312°/1.7 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-2 Blank		26	0.2	51	0.2		
		27	0.2	52	0.0		
3	0.0	28	0.4	Stations 53-100 Blank			
4	0.0	29	0.3				
5	0.0	30	0.3				
6	0.0	31	0.3				
7	0.0	32	0.3				
8	0.0	33	0.4				
9	0.0	34	0.7				
10	0.0	35	0.8				
11	0.0	36	0.8				
12	0.0	37	0.8				
13	0.0	38	0.9				
14	0.0	39	1.5				
15	0.0	40	1.1				
16	0.1	41	0.8				
17	0.1	42	0.8				
18	0.2	43	0.7				
19	0.2	44	0.7				
20	0.2	45	0.8				
21	0.2	46	1.0				
22	0.3	47	2.0				
23	0.2	48	2.7				
24	0.3	49	1.8				
25	0.3	50	0.2				



MASS DEPOSIT

MATERIAL: Fuel Oil

FLOW RATE: 455 GPM

DATE: 13 June 1963

SYSTEM: C-123/MC-1

FLIGHT #: 5

AIRSPEED: 130 knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 feet

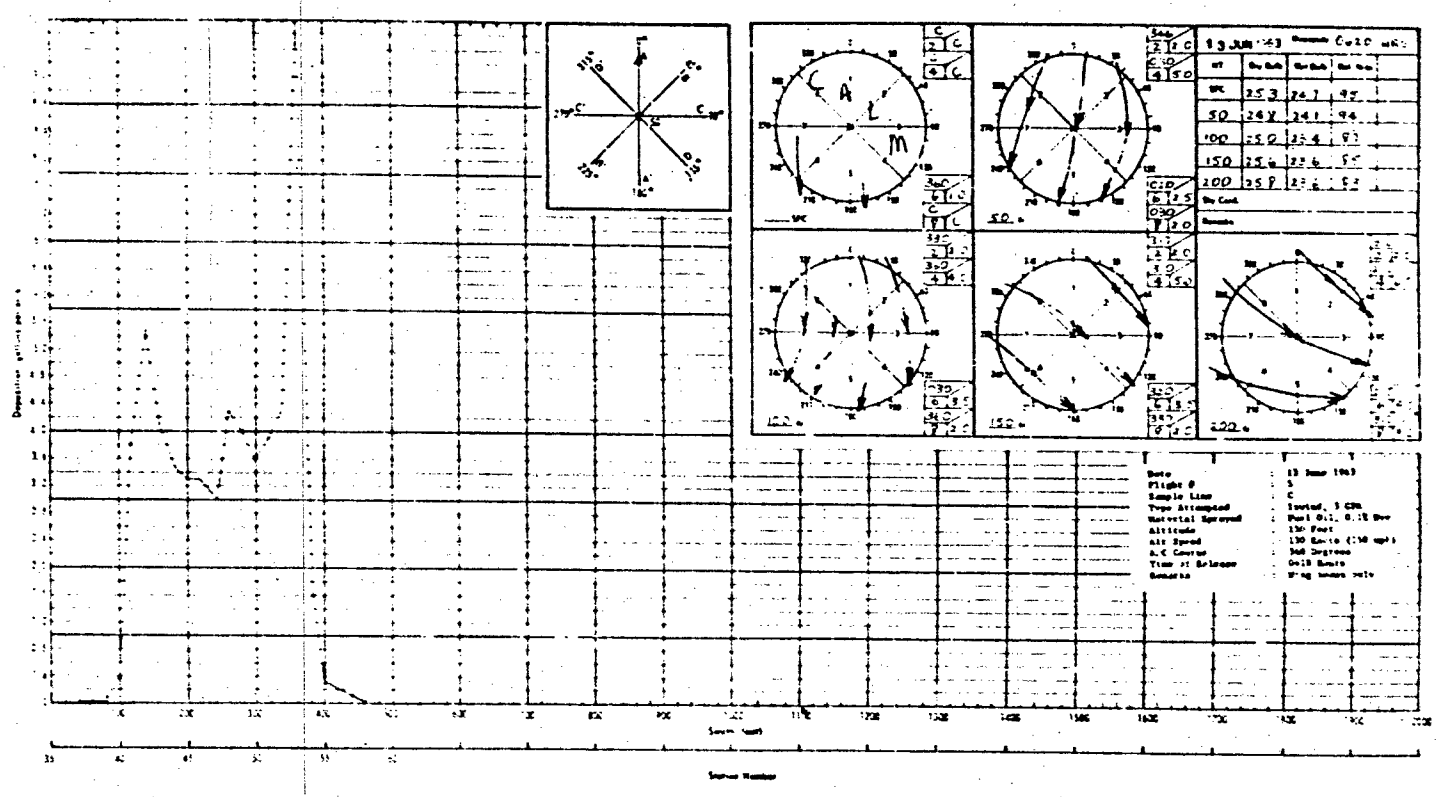
TIME OF RELEASE: 0618 hours

AIRCRAFT COURSE 360 degrees

DURATION: 12.5 seconds

WIND VECTOR: 344° / 2.2 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-36 blank		37	0.0				
		38	0.0				
		39	0.0				
		40	0.4				
		41	3.8				
		42	5.5				
		43	4.1				
		44	3.5				
		45	3.3				
		46	3.3				
		47	3.0				
		48	4.3				
		49	4.0				
		50	3.6				
		51	3.9				
		52	4.3				
		53	10.0				
		54	1.6				
		55	0.3				
		56	0.2				
		57	0.1				
		Stations 58-100 blank					


Deposition
Sample Number
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Air Speed
A.C Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: Fuel Oil

FLOW RATE: 425 GPM

DATE: 13 June 1963

SYSTEM: C-123/MC-1

FLIGHT #: 6

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 Feet

TIME OF RELEASE: 0640 Hours

AIRCRAFT COURSE 090° Degrees

DURATION: 12 Seconds

WIND VECTOR: 263°/2.1 mph

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1-24 Blank		26	0.0				
		27	0.0				
		28	0.1				
		29	0.2				
		30	0.2				
		31	0.3				
		32	0.5				
		33	0.7				
		34	1.4				
		35	8.3				
		36	6.5				
		37	2.7				
		38	1.9				
		39	1.7				
		40	3.4				
		41	4.5				
		42	2.3				
		43	2.5				
		44	2.7				
		45	3.2				
		46	4.1				
		47	5.7				
		48	3.7				
		49	0.2				
25	0.0	50	0.0				

C-1.3/EC-1 GROUND FLOW & FLIGHT DATA

ATC CALIBRATED:	1 June 1963	DATE TEST FLOWN:	24 June 1963
LIQUID SPRAYED:	Fuel Oil	TOTAL NOZZLES OPEN:	72
NOZZLE TYPE:	Check valves only	LIQUID TEMP:	
DURATION OF SPRAY:	15 Sec	PUMP PRESSURE:	58-36
ATC R.P.M.:	1 06-26	:	
NO. OF PUMPS:		FLOW METER READING:	415 GPM
TOTAL AMOUNT SPRAYED:	1.2 Gals	FLOW RATE CALIBRATED:	408 GPM
ATC CONFIGURATION:	WING: 1-7, 11-21, 29-40 Under TAIL: 1-4, 37-40 Aft		

OPERATIONAL DATA DURING FLIGHT

ATC	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	1 -26	58	58	425
	31-0-17	60	38	445

[illegible] check valves - 6115
[illegible] valves - 61[illegible]

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 21 June 1963

DATE TEST FLOWN: 24 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 84

NOZZLE TYPE: Check valves only

LIQUID TEMP:

DURATION OF SPRAY: 15 Sec

PUMP PRESSURE: 52 - 32

PUMP R.P.M.: 2900 - 2500

:

NO. OF PUMPS: 2

FLOW METER READING: 425 GPM

TOTAL AMOUNT SPRAYED: 108 Gals

FLOW RATE CALIBRATED: 432 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-40 Under
1-4, 37-40 Aft
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	2900-2500	52	32	425

REMARKS: Right wing check valves - 6135
Left wing & tail check valves - 6140

MASS DEPOSIT

MATERIAL: Fuel Oil

FLOW RATE: 4.5 GPM

DATE: 24 June 1963

SYSTEM: E-123/RC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: D

ALTITUDE: 150 Feet

TIME OF RELEASE: 0500 Hours

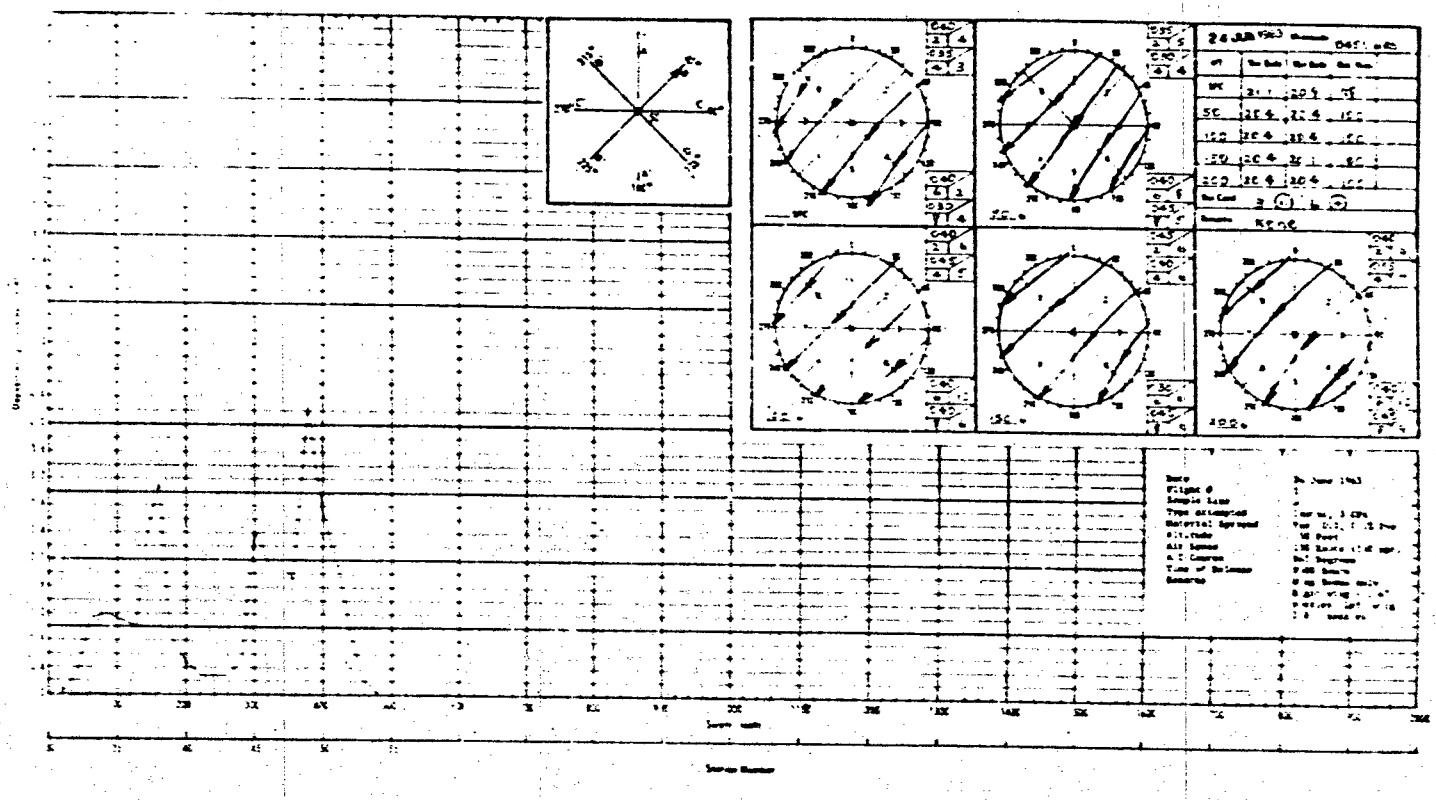
AIRCRAFT COURSE: 245 Degrees

DURATION: 15 Seconds

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 29 Blank		30	0.0				
		31	0.0				
		32	0.3				
		33	1.1				
		34	1.7				
		35	1.1				
		36	1.0				
		37	2.2				
		38	3.1				
		39	0.9				
		40	0.5				
		41	0.3				
		42	0.3				
		43	0.3				
		44	[illegible]				
		45	2.4				
		46	2.1				
		47	[illegible]				
		48	1.7				
		49	1.1				
		50	.7				
		51	1.0				
		52	.2				
		53	[illegible]				
		Stations 54 - 100 Blank					

Total [illegible]



MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 24 June 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0518 Hours

DURATION: 12 Seconds

FLOW RATE: 445 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

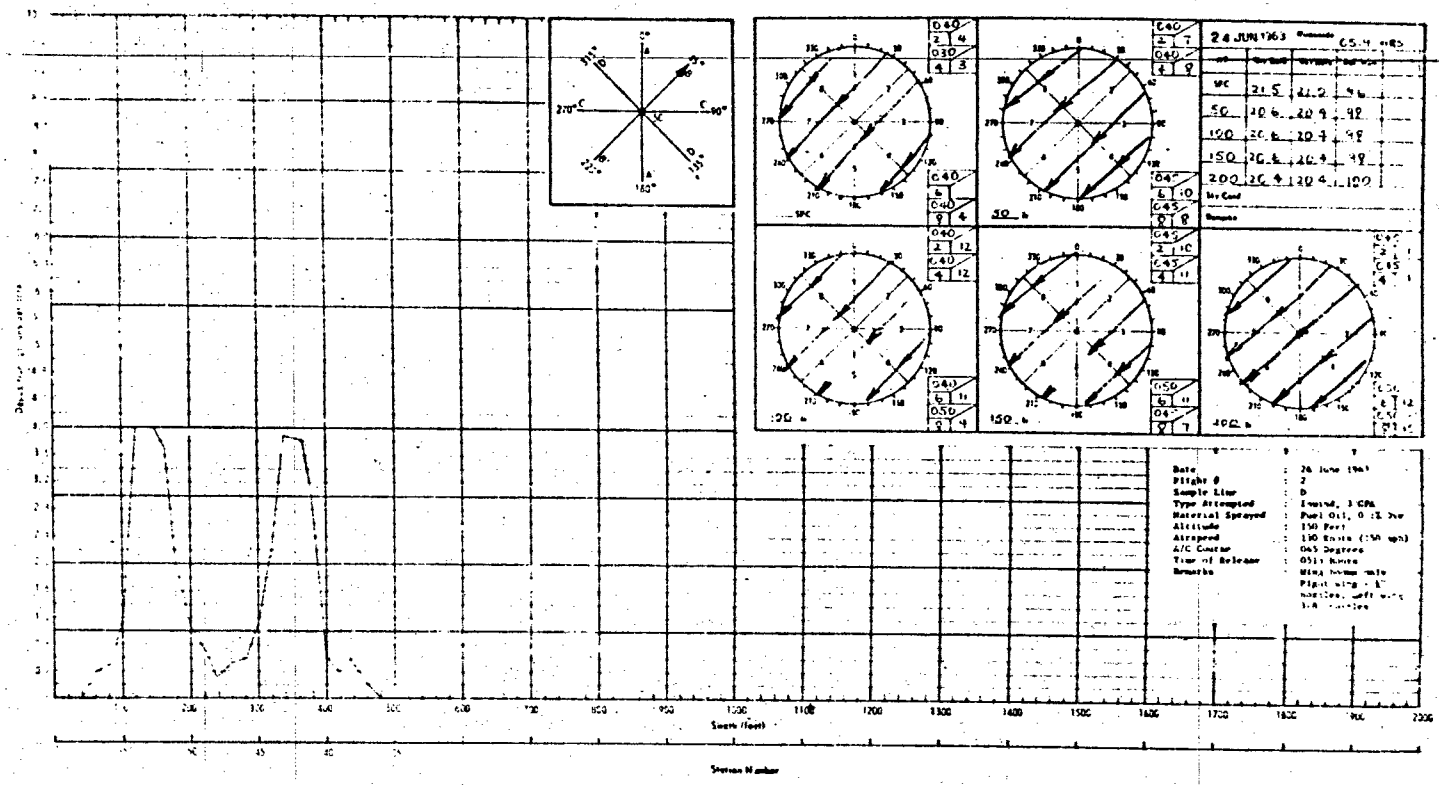
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 36 Blank		37	0.2				
		38	0.6				
		39	0.4				
		40	0.6				
		41	3.1				
		42	3.8				
		43	3.9				
		44	2.1				
		45	1.1				
		46	0.6				
		47	0.5				
		48	0.3				
		49	0.7				
		50	1.1				
		51	2.1				
		52	3.7				
		53	4.0				
		54	4.0				
		55	1.2				
		56	0.5				
		57	0.4				
		58	0.0				
		Stations 59 - 100 Blank					

Total 34.9


24 JUN 1963
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
A/C Course
Time of Release
Remarks
Swath (feet)
Station Number

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 24 June 1963

FLIGHT #: 3

SAMPLE LINE: D

TIME OF RELEASE: 0539 Hours

DURATION: 12.80 Seconds

FLOW RATE: 425 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

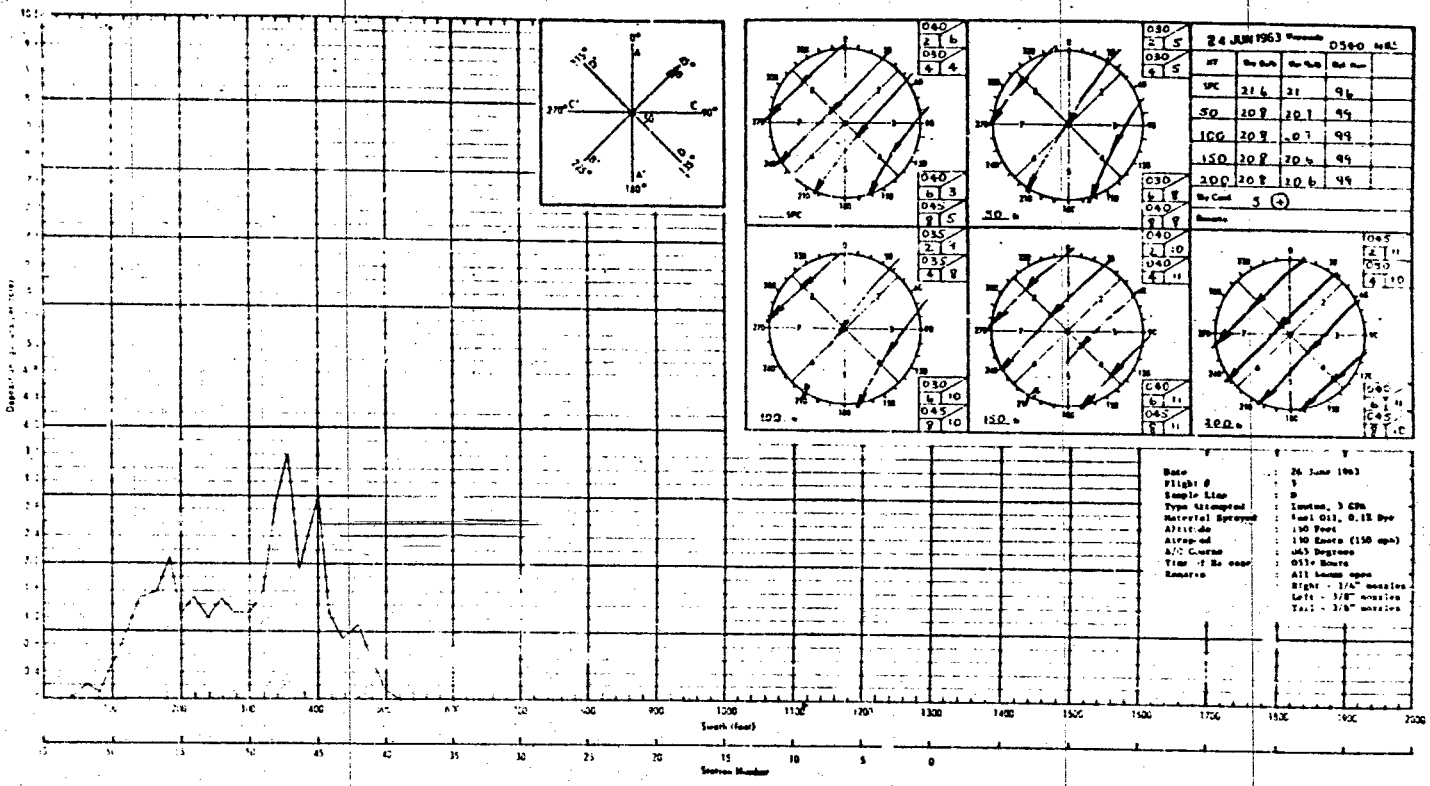
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 38 Blank		39	0.0				
		40	0.1				
		41	0.7				
		42	1.1				
		43	0.9				
		44	1.3				
		45	3.0				
		46	1.9				
		47	3.6				
		48	2.9				
		49	1.6				
		50	1.3				
		51	1.3				
		52	1.5				
		53	1.2				
		54	1.5				
		55	1.3				
		56	2.1				
		57	1.6				
		58	1.5				
		59	0.9				
		60	0.5				
		61	0.1				
		62	0.2				
		Stations 63 - 100 Blank					

Total 32.1


24 JUN 1963
0540 MST
SPC
50
100
150
200
Swath (feet)
Station Number
Date : 26 June 1963
Flight # : 9
Sample Line : D
Type Attempted : Instant, 3 GPA
Material Sprayed : Fuel Oil, 0.1% Dye
Altitude : 150 Feet
Airspeed : 150 Knots (150 mph)
A/C Course : 065 Degrees
Time of Re-ease : 0540 Hours
Remarks : All booms open
Right - 3/4" nozzles
Left - 3/8" nozzles
Tail - 3/8" nozzles

C-1.3/RC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 21 June 1963

DATE TEST FLOWN: 25 June 1963

LIQUID SPRAYED: Fuel Oil

TOTAL NOZZLES OPEN: 72

NOZZLE TYPE: Check valves only

LIQUID TEMP:

DURATION OF SPRAY: 15 Sec

PUMP PRESSURE: 38 - 36

PUMP R.P.M.: 3000-2000

NO. OF PUMPS: 2

FLOW METER READING: 415 GPM

TOTAL AMOUNT SPRAYED: 102 Gal

FLOW RATE CALIBRATED: 438 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-40 Underside; 1-4, 37-40 Alt side

TAIL:

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3000-2000	58	38	425
2	1200-2700	59	37	435

REMARKS: All odd numbers openings on underside of boom have ½" check valve 06135.
All even numbers openings on underside of boom have ½" check valve 06135.
All openings on alt side have ½" check valve 06135.
Wing boom only.

C-130 [illegible] BOOM FLOW & FLIGHT DATA

DATE CALIBRATED: 21 June 1963 — DATE TEST FLOWN: 25 June 1963

LIQUID SPRAYED: Fuel Oil — TOTAL NOZZLES OPEN: 75

NOZZLE TYPE: Check valves only — LIQUID LOAD: [illegible]

DURATION OF SPRAY: 15 Sec. — PUMP PRESSURE: 52 - 32

PUMP R.P.M.: 2100-2500 — [illegible]

NO. OF PUMPS: 2 — FLOW METER READING: 425 GPM

TOTAL AMOUNT SPRAYED: 108 Gal. — FLOW RATE CALIBRATED: 432 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-31, 29-40 Underside; 1-4, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

BOOM #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	3[illegible] (2600)	52	32	4[illegible]
[illegible]	31[illegible] (2500)	55	32	[illegible]

[illegible] All odd numbered openings on underside of boom are [illegible] check valve [illegible].
All even numbered openings on underside of boom have ½" check valve #6113.
All openings on aft side have ½" check valve [illegible].
All openings on tail boom are on aft side. Openings number 1-4 are [illegible] ½" check valve #6115. Openings number 5-19 are ½" check valve [illegible].

C-123/UC-1 AERIAL FLOW & FLIGHT DATA

DATE CALIBRATED: 21 June 1963 DATE TEST FLOWN: 25 June 1963

LIQUID SPRAYED: Fuel Oil TOTAL NOZZLES OPEN: 72

NOZZLE TYPE: Check valves only LIQUID TEMP:

DURATION OF SPRAY: 1 sec. PUMP PRESSURE: 44 - 22

PUMP R.P.M.: [illegible] :

NO. OF PUMPS: 1 FLOW METER READING: 215 GPM

TOTAL AMOUNT SPRAYED: 37.5 Gal. FLOW RATE CALIBRATED: 225 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 27-40 Underside 1-7, 37-[illegible] Rt side
TAIL:

OPERATIONAL DATA DURING TEST FLIGHT

No.	Date	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	[illegible]	44	22	215
6	[illegible]	44	22	215

REMARKS: [illegible] Daily.
Check valves [illegible] from [illegible]

C-123/C-1 GROUND FLOW & FLIGHT DATA

UNIT CALIBRATED:	25 June 1963	DATE TEST FLOWN:	25 June 1963
LIQUID SPRAYED:	Fuel Oil	TOTAL NOZZLES OPEN:	40
NOZZLE TYPE:	Check valves only	LIQUID TEMP:	
DURATION OF SPRAY:	15 sec.	PUMP PRESSURE:	[illegible]
PUMP RPM:	25[illegible]-[illegible]		
NO. OF PUMPS:	1	FLOW METER READING:	215 GPM
TOTAL AMOUNT SPRAYED:	53 Gal.	FLOW RATE CALIBRATED:	212 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-40 Underside; 1-6, 37-40 Aft side
TAIL: 1-6, 13-19

OPERATIONAL DATA DURING FLIGHT

Load	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
[illegible]	25[illegible]-[illegible]	[illegible]	22	210

REMARKS: All boom.
Check valves same as Runs 3 and 4.

MASS MEDIAN DIAMETER

DATE: 25 June 1963

FLIGHT #: 1

SAMPLE LINE: B

FLOW RATE: 425 GPM

SPREAD FACTOR: 6.0

CONVERSION FACTOR: 2.5

PAPER: Kromekote, white

MATERIAL: Fuel Oil

SYSTEM: C-123/NC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
51	5	5900			
51	4	5800			
5[illegible]	2	5100*			
5[illegible]	1	5000			
5[illegible]	3	4900			
55	8	4800	100	1	100 Microns (smallest)
5[illegible]	7	4600			
54	6	4500			
51	10	44[illegible]0			
53	9	43[illegible]0			
52	12	42[illegible]			
51	11	41[illegible]0			

MMD = $\frac{70.4410.1431 \text{ Spot D Max}}{\text{Con. Factor}}$ = $\frac{70.4410.1431(51[illegible])}{2.5}$ = $\frac{51[illegible]}{6.0[illegible]7.5}$ = 3[illegible] Microns

Max. Sph. Dia. = 70.4410.1431 Max Spot = 70.4[illegible] 1(5[illegible]) = 8[illegible]3.3 Microns

Min. Sph. Dia. = 16.7 Microns

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 23 June 1963

FLIGHT #: 1

SAMPLE LINE: B

TIME OF RELEASE: .447 Hours

DURATION: 12 Sec.

FLOW RATE: 425 GPM

SYSTEM: C-123/MC-1

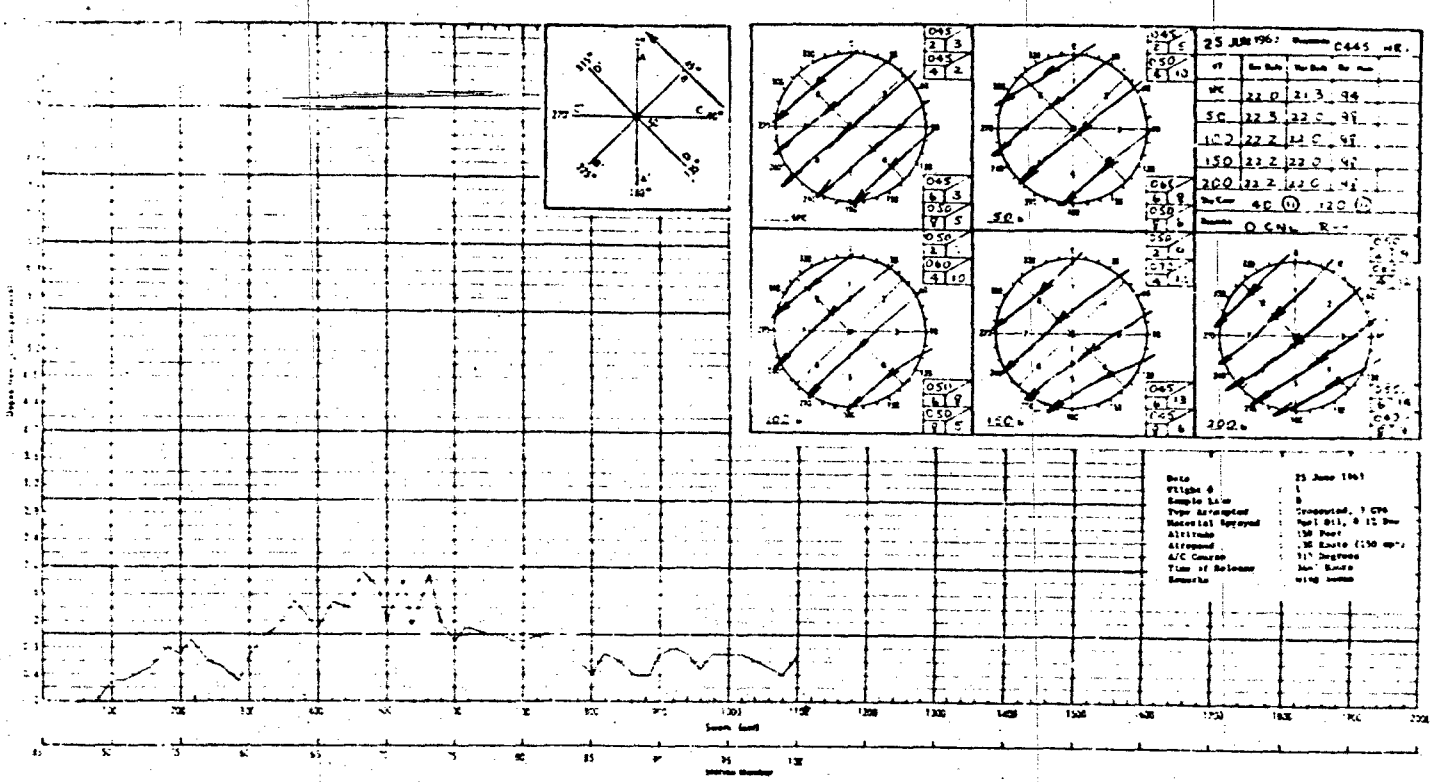
AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 315 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 50 Blank				51	0.3	76	1.1
				52	0.4	77	1.0
				53	0.5	78	1.0
				54	0.6	79	[illegible]
				55	0.7	80	0.9
				56	0.9	81	1.0
				57	0.0	82	0.8
				58	0.5	83	0.6
				59	0.3	84	0.6
				60	0.7	85	[illegible]
				61	1.0	86	0.7
				62	1.1	87	0.0
				63	1.5	88	[illegible]
				64	1.3	89	[illegible]
				65	1.1	90	0.7
				66	1.5	91	[illegible]
				67	1.4	[illegible]	[illegible]
				68	[illegible]	93	[illegible]
				69	1.7	94	0.7
				70	1.2	95	0.7
				71	1.3	96	[illegible]
				72	1.1	97	0.6
				73	1.0	98	0.5
				74	1.	99	[illegible]
				75	[illegible]	100	[illegible]


25 JUN 1961
0445 HR.
Date
Flight #
Sample Line
Type Aerosol
Material Sprayed
Altitude
Airspeed
A/C Course
Time of Release
Remarks
25 June 1961

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 25 June 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0508 Hours

DURATION: 12 Sec.

FLOW RATE: 4.5 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

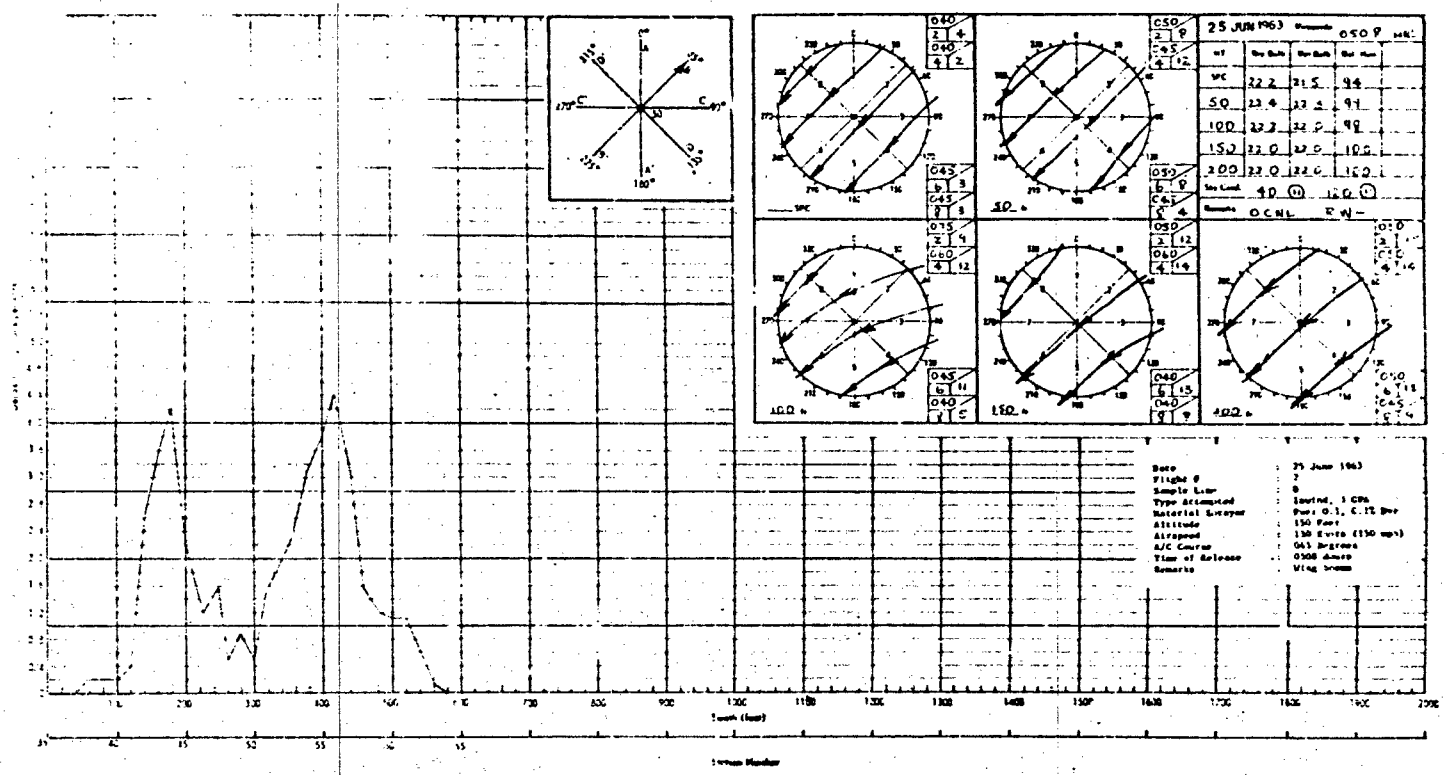
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 37 Blank		38	0.2	63	0.1		
		39	0.2	Stations 64 - 100 Blank			
		40	0.2				
		41	0.4				
		42	2.6				
		43	3.6				
		44	6.2				
		45	2.2				
		46	1.2				
		47	1.6				
		48	0.5				
		49	0.9				
		50	0.5				
		51	1.5				
		52	1.9				
		53	2.3				
		54	3.3				
		55	3.8				
		56	4.4				
		57	3.2				
		58	1.6				
		59	1.2				
		60	1.1				
		61	1.1				
		62	.6				

Total 44.4


25 JUN 1963
0509
OCNL
Date
Flight #
Sample Line
Type Attempted
Material Sampler
Altitude
Airspeed
A/C Course
Time of Release
Remarks
Wing Sampler

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 25 June 1963

FLIGHT #: 3

SAMPLE LINE: D

TIME OF RELEASE: 0522 Hours

DURATION: 11 Sec.

FLOW RATE: 420 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

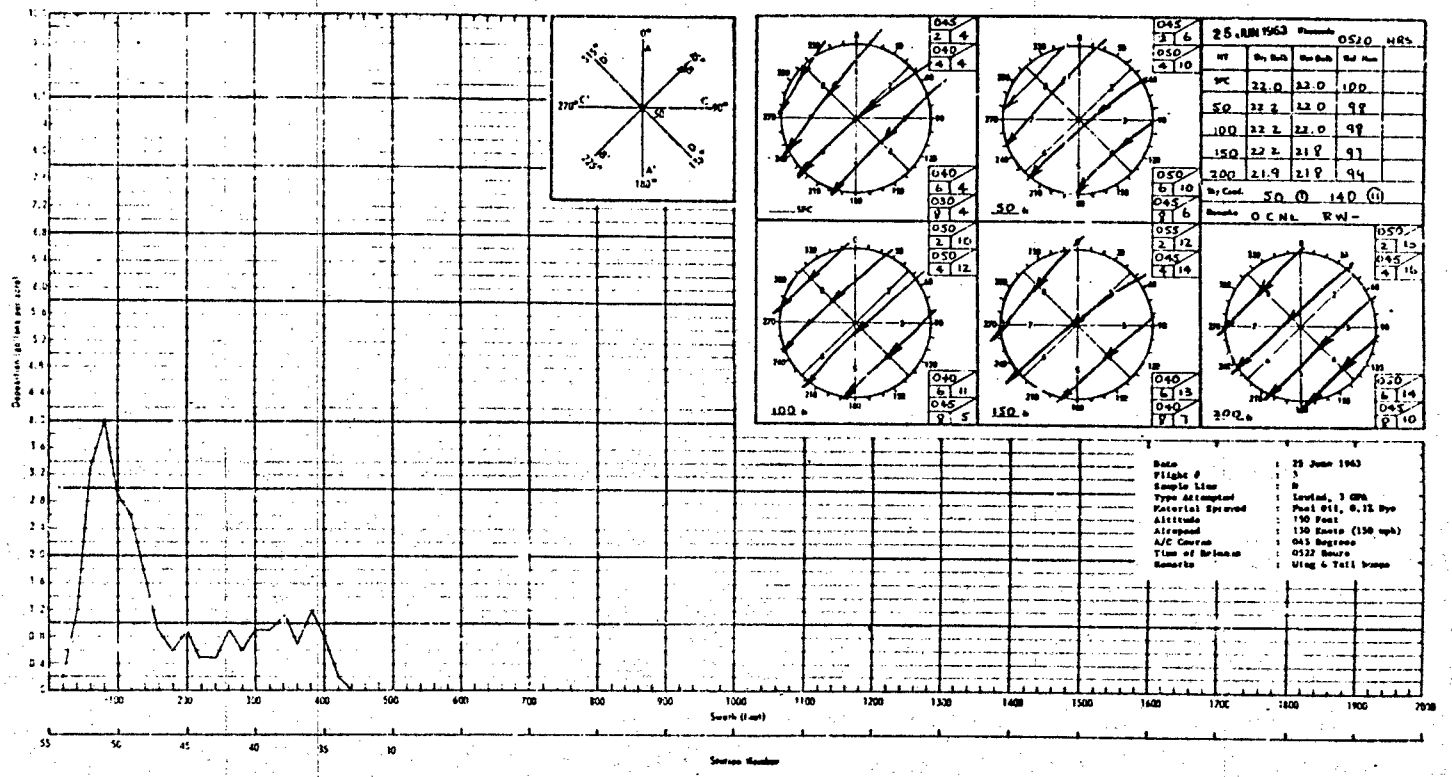
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 32 Blank		33	0.0				
		34	0.2				
		35	0.8				
		36	1.2				
		37	0.7				
		38	1.1				
		39	0.9				
		40	0.9				
		41	0.6				
		42	0.8				
		43	0.5				
		44	0.5				
		45	0.9				
		46	0.6				
		47	0.9				
		48	1.7				
		49	2.6				
		50	2.9				
		51	4.0				
		52	3.3				
		53	1.2				
		54	0.2				
		Stations 55 - 100 Blank					

Total 26.6


Deposition (gallons per acre)
Swath (feet)
Station Number
Date : 25 June 1963
Flight # : 5
Sample Line : 8
Type Attempted : Leveled, 3 GPA
Material Sprayed : Fuel Oil, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots (150 mph)
A/C Course : 045 Degrees
Time of Release : 0522 Hours
Remarks : Wing & Tail boom
25 JUN 1963
0520 HRS
SPC
50 ft
100 ft
150 ft
200 ft
OCNL RW-

MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 25 June 1963

FLIGHT #: 4

SAMPLE LINE: D

TIME OF RELEASE: 0539 Hours

DURATION: 13 Sec.

FLOW RATE: 445 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

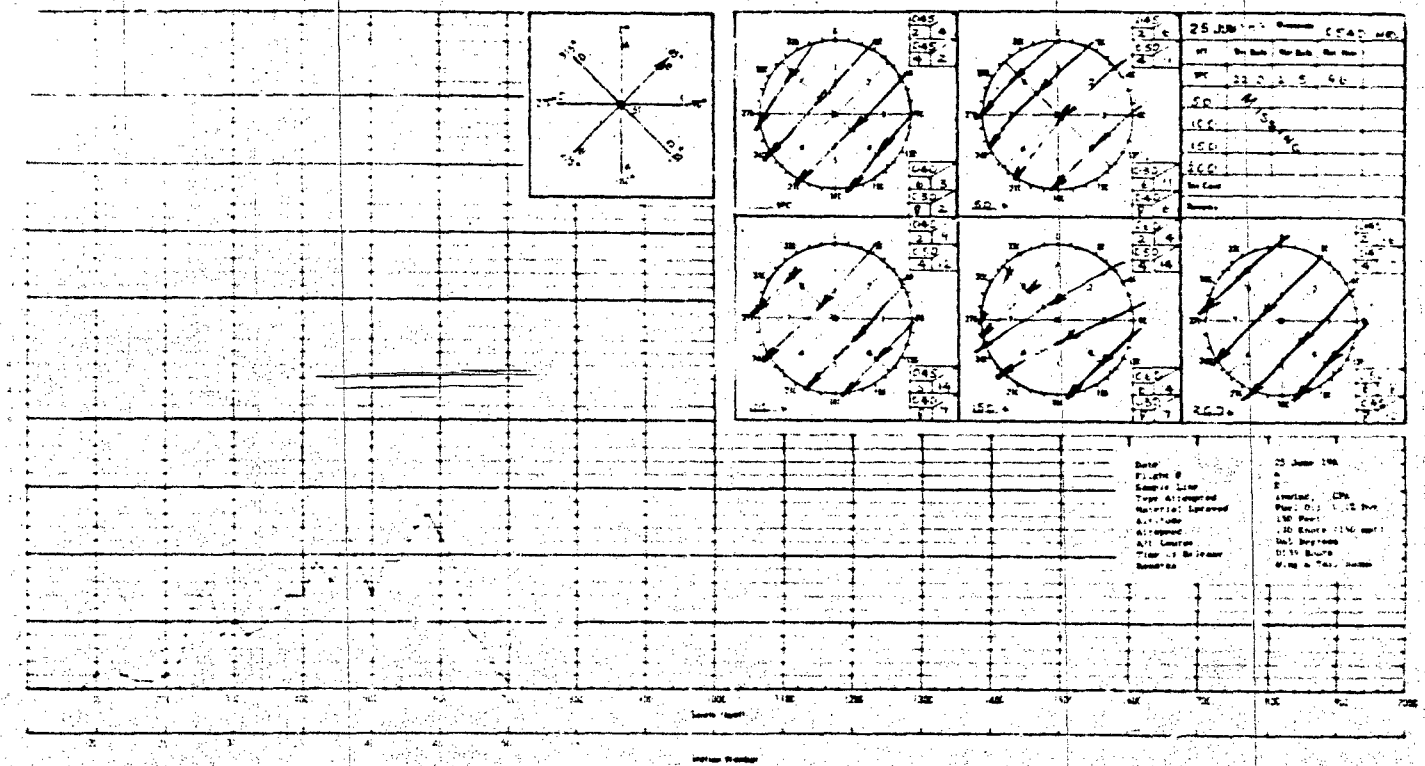
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 18 Blank		26	0.4	Stations 51 - 100 Blank			
		27	1.2				
		28	1.6				
		29	0.8				
		30	1.0				
		31	0.8				
		32	0.9				
		33	1.2				
		34	1.4				
		35	1.4				
		36	1.9				
		37	1.6				
		38	2.4				
		39	1.9				
		40	1.4				
		41	1.9				
		42	1.9				
		43	2.4				
19	0.0	44	2.6				
20	0.2	45	2.3				
21	0.4	46	1.9				
22	0.2	47	0.9				
23	0.1	48	0.7				
24	0.1	49	0.3				
25	0.2	50	0.1				

Total 36.1



MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 25 June 1963

FLIGHT #: 5

SAMPLE TIME: D

TIME OF RELEASE: 0555 Hours

DURATION: 8 Sec.

FLOW RATE: 215 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

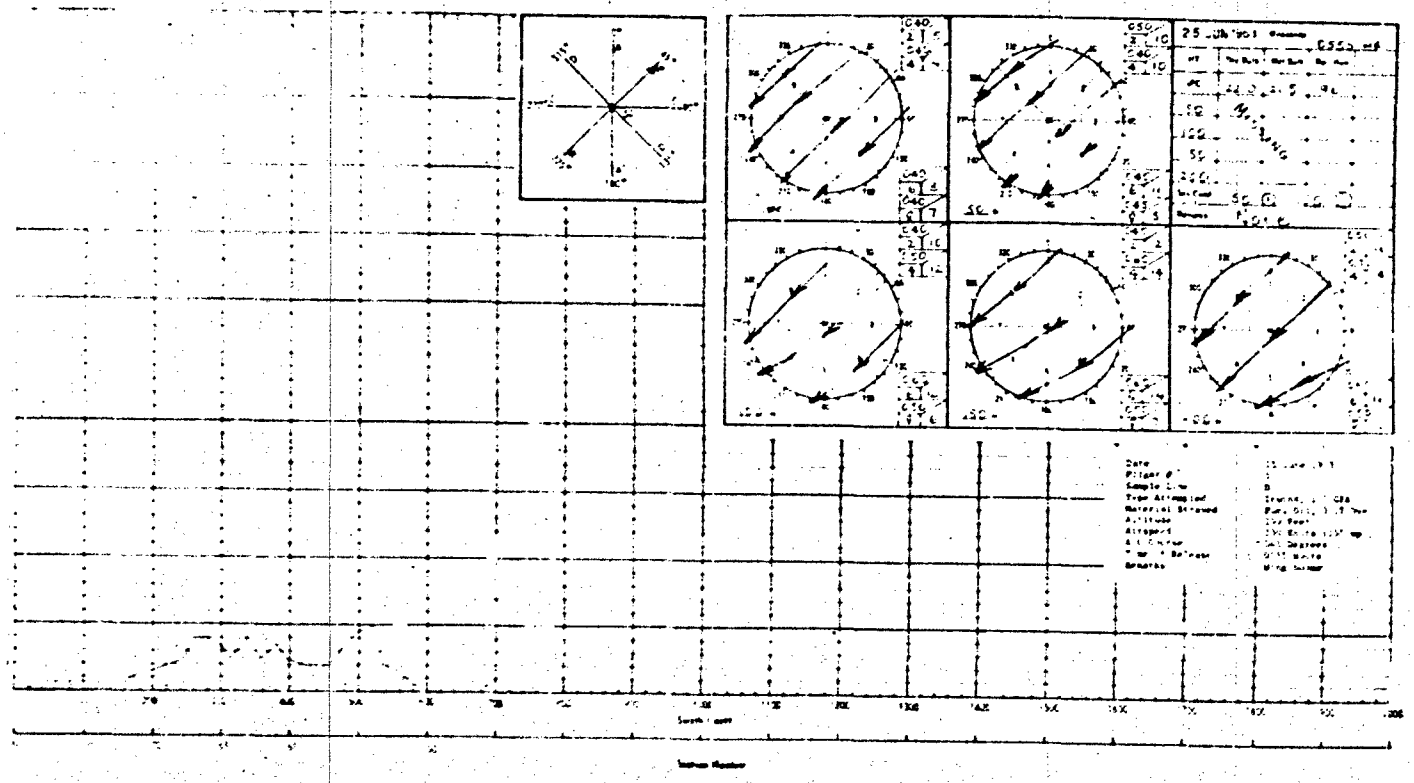
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 5 Blank				51	0.1	76	0.1
				52	0.3	77	0.1
				53	0.4	78	0.1
				54	1.0	Stations 79 - 100	
				55	0.9		Blank
				56	0.7		
				57	0.4		
				58	0.4		
				59	0.4		
				60	0.5		
				61	0.7		
				62	0.5		
				63	0.8		
				64	0.5		
				65	0.7		
				66	0.8		
				67	0.8		
				68	0.5		
				69	0.4		
				70	0.3		
				71	.3		
				72	0.1		
				73	0.1		
				74	.1		
				75	0.1		

Total 1.1



MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 25 June 1963

FLIGHT #: 6

SAMPLE LINE: D

TIME OF RELEASE: 1612 Hours

DURATION: 13 Sec.

FLOW RATE: 2.5 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

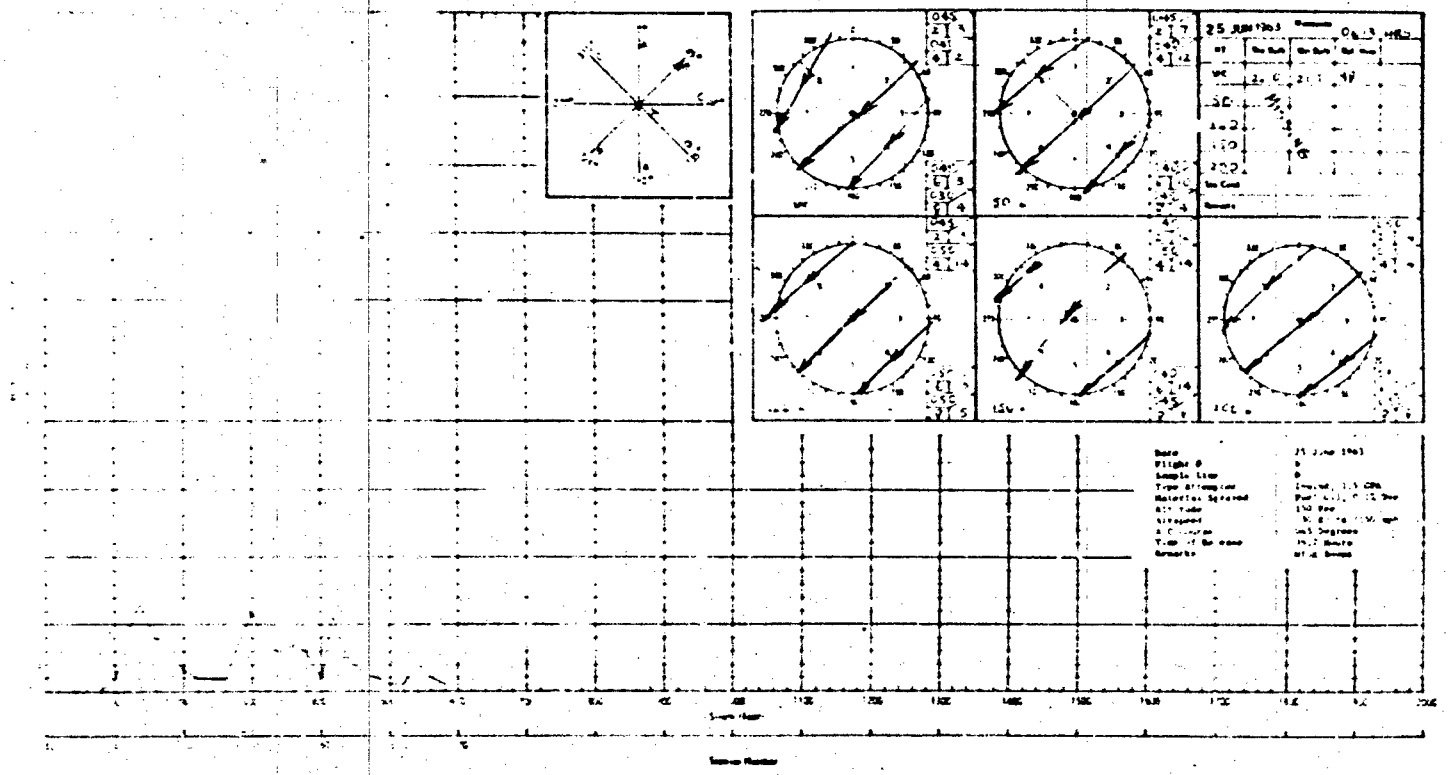
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 43 Blank.		44	0.0	69	0.1		
		45	0.2	Stations 70 - 100 Blank			
		46	0.9				
		47	1.3				
		48	0.8				
		49	0.7				
		50	0.3				
		51	.2				
		52	0.2				
		53	.2				
		54	1.7				
		55	1.2				
		56	0.7				
		57	.6				
		58	.7				
		59	0.6				
		60	0.2				
		61	1.1				
		62	.5				
		63	0.3				
		64	0.2				
		65	.1				
		66	.1				
		67	0.0				
		68	.2				

Total 12.5



MASS DEPOSIT

MATERIAL: Fuel Oil

DATE: 25 June 1963

FLIGHT #: 7

SAMPLE LINE: D

TIME OF RELEASE: 0637 Hours

DURATION: 13 Sec.

FLOW RATE: 10 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots (150 mph)

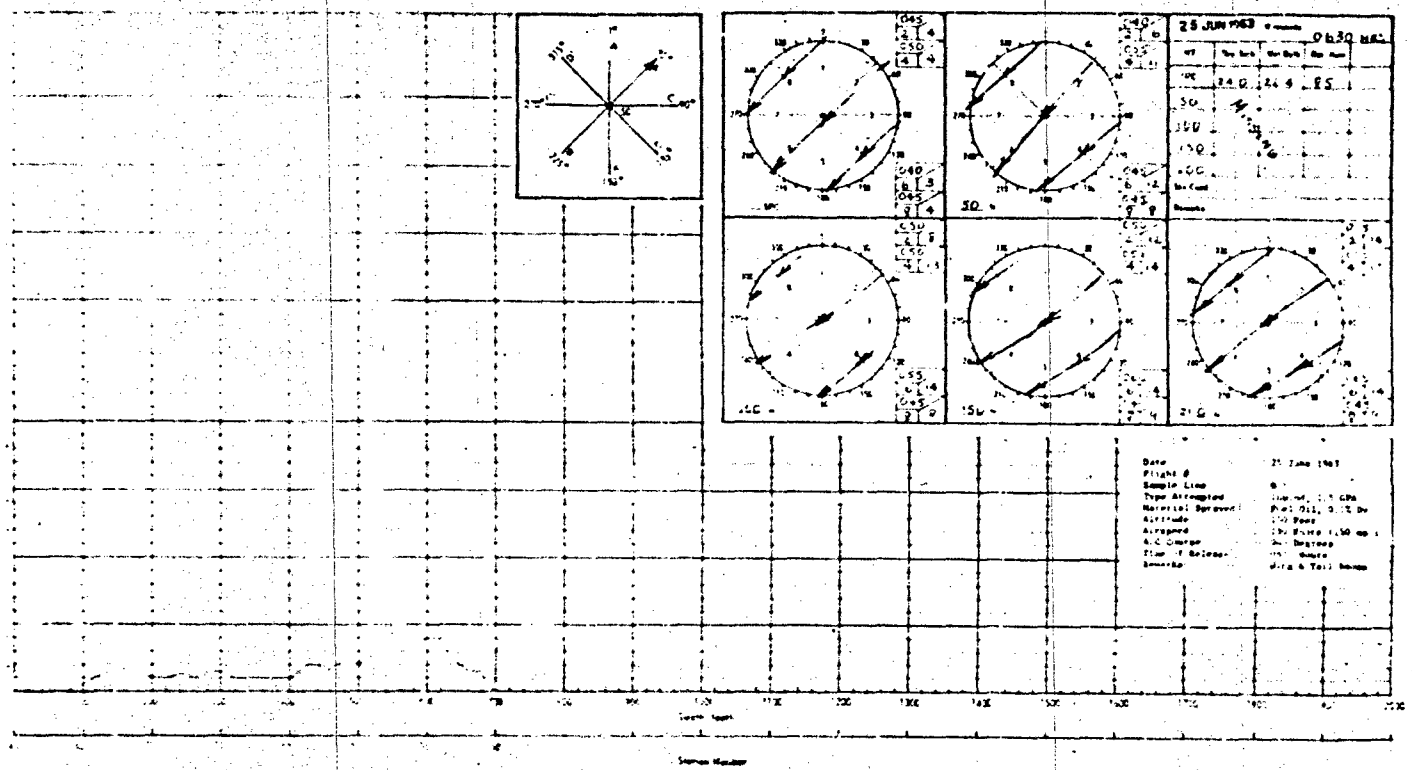
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 50 Blank				51	0.3	76	0.3
				52	0.3	77	0.3
				53	0.5	78	0.3
				54	0.8	79	0.2
				55	0.8	80	0.1
				56	0.7	Stations 81 - 100	
				57	0.6	Blank	
				58	0.6		
				59	0.6		
				60	0.4		
				61	0.5		
				62	0.3		
				63	0.4		
				64	0.4		
				65	0.2		
				66	0.2		
				67	.2		
				68	0.2		
				69	0.2		
				70	0.3		
				71	0.3		
				72	0.2		
				73	0.3		
				74	0.2		
				75	0.2		

Total 1.6


25 JUN 1963
0630 MST
Date
Flight #
Sample Line
Type Aircraft
Altitude
Aircraft
Time of Release
Remarks

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 29 June 1963

DATE TEST FLOWN: 1 July 1963

LIQUID SPRAYED: 1 Part Purple, 2 Parts Fuel Oil

TOTAL NOZZLES OPEN: 84

NOZZLE TYPE: Check valves

LIQUID TEMP: 28.5° C

DURATION OF SPRAY: 15 Secs

PUMP PRESSURE: 54-32

PUMP R.P.M.: 28.0-24.0

:

NO. OF PUMPS: 2

FLOW METER READING: 415 GPM

TOTAL AMOUNT SPRAYED: 105 Gal

FLOW RATE CALIBRATED: 420 GP GPM

NOZZLE CONFIGURATION: WING. 1-7, 13-21, 29-40 Underside; 1-4, 37-40 Aft side

TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	28.0-24	54	32	415

REMARKS: All odd numbered openings on underside of boom have ½" check valve (#14).
All even numbered openings on underside of boom have ½" check valve (#13).
All openings on aft side have ½" check valve (#14).
Opening numbers 1-4, 16-19 are 2" check valve (#13).
All check openings on tail are #14.

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 415 GPM

DATE: 1 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: D

ALTITUDE: 150 Feet

TIME OF RELEASE: 0625 Hours

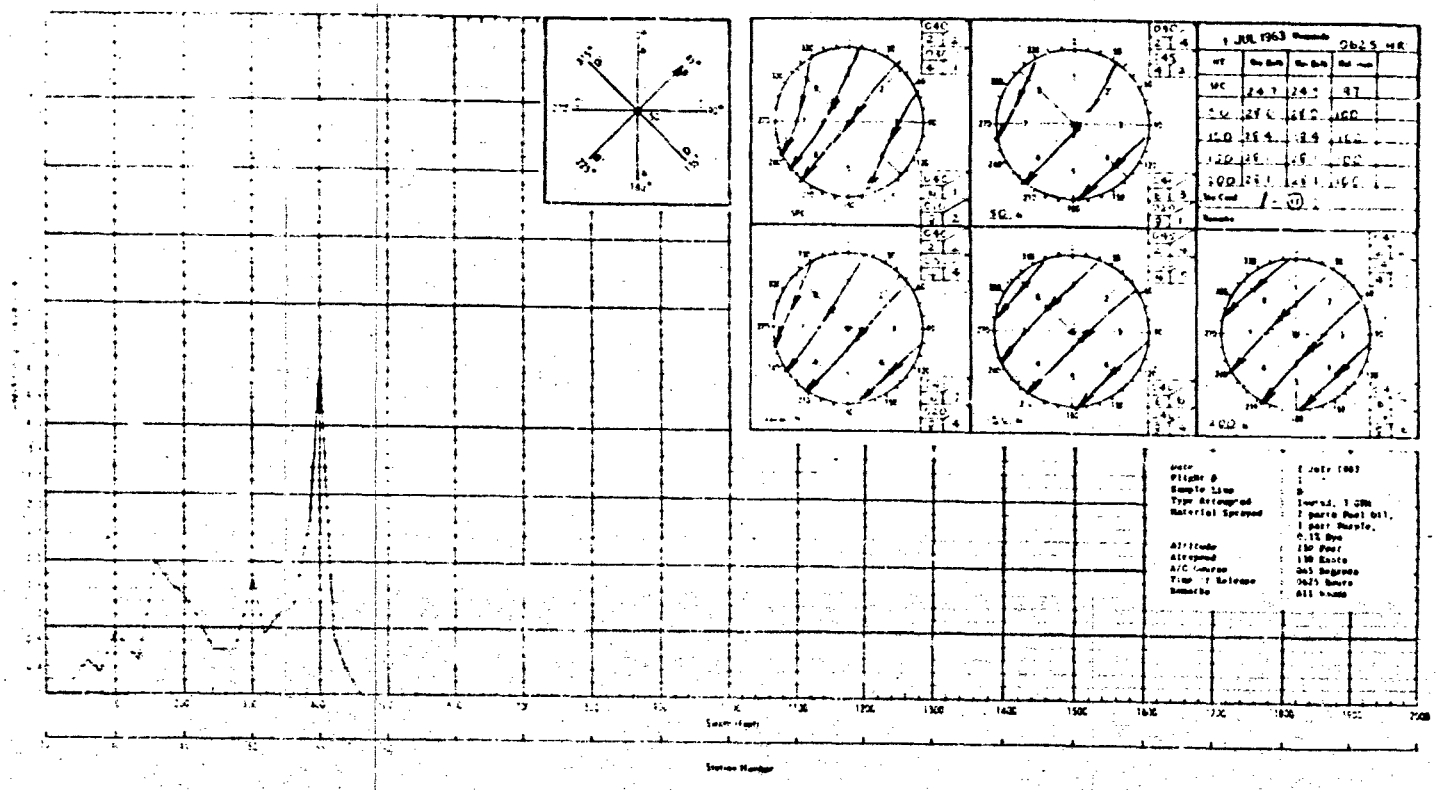
AIRCRAFT COURSE: 045 Degrees

DURATION: 37 Sec.

WIND VECTOR:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 36 Blank		37	0.2				
		38	0.5				
		39	0.3				
		40	0.9				
		41	0.7				
		42	0.5				
		43	2.0				
		44	1.7				
		45	1.5				
		46	1.1				
		47	0.9				
		48	0.7				
		49	[illegible]				
		50	1.7				
		51	0.9				
		52	1.3				
		53	1.3				
		54	2.6				
		55	[illegible]				
		56	[illegible]				
		57	[illegible]				
		Stations 5[illegible]	[illegible]				

Total [illegible]


1 JUL 1963
0625 HR
Date
Flight #
Sample Line
Type Aerosprayed
Material Sprayed
Altitude
Airspeed
A/C Course
Time of Release
Remarks
Station Number

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 29 June 1963 | DATE TEST FLOWN: 4 July 1963

FLUID SPRAYED: 3 Fuel Oil, 1 Purple | TOTAL NOZZLES OPEN: 72

NOZZLE TYPE: Check valve only | LIQUID TEMP:

DURATION OF SPRAY: 15 Secs | PUMP PRESSURE: 64 - 40

ENG. R.P.M.: 3000-2600 | :

NO. OF PUMPS: 2 | FLOW METER READING: 420 GPM

TOTAL AMOUNT SPRAYED: 106 Gal. | FLOW RATE CALIBRATED: 424 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-40 Underside; 1-4, 37-40 Aft side

TAIL:

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3000-2600	64	40	405
2	3000-2600	64	40	410

REMARKS: All odd numbered openings on underside of boom have ½" check valve #614.
All even numbered openings on underside of boom have ½" check valve #6135.
All openings on aft said have ½" check valve #6140.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 29 June 1963

DATE TEST FLOWN: 4 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 8[illegible]

NOZZLE TYPE: Check valves only

LIQUID TEMP: 28.5° C [illegible]

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 54 - 32

PUMP R.P.M.: 2800-2400

NO. OF PUMPS: 2

FLOW METER READING: 415 GPM

TOTAL AMOUNT SPRAYED: 1.5 Gal.

FLOW RATE CALIBRATED: 420 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-[illegible] Underside; 1-4, 37-40 Aft side

TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

ROW #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	2800-2600	56	34	400
4	2400-2500	58	36	425

REMARKS: All odd numbered openings on underside of boom have ½" check valve #614 .
All even numbered openings on underside of boom have ½" check valve #6135.
All openings on aft side have ½" check valve #614[illegible].
All openings on tail boom are on aft side. Opening number 1-4 and 16-1[illegible] are ½" check valve #6135. Openings numbered 5-15 are ½" check valve #614[illegible].

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 29 June 1963

DATE TEST FLOWN: 4 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 72

NOZZLE TYPE: Check valves only

LIQUID TEMP:

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 48 - 24

PUMP R.P.M.: 2600-2200

:

NO. OF PUMPS: 1

FLOW METER READING: 215 GPM

TOTAL AMOUNT SPRAYED:

FLOW RATE CALIBRATED: 2[illegible] GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 2[illegible]-4[illegible] Underside
1-4, 37-4[illegible] Aftside

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	2700-2300	50	25	215
6	2600-2300	5[illegible]	25	2[illegible]

[illegible] Openings same as runs 1 and [illegible].

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 29 June 1963

DATE TEST FLOWN: 4 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 72

NOZZLE TYPE: Check valves only

LIQUID TEMP:

DURATION OF SPRAY: 15 sec

PUMP PRESSURE: 44 - 25

PUMP R.P.M.: 2500-2100

:

NO. OF PUMPS: 1

FLOW METER READING: 220 GPM

TOTAL AMOUNT SPRAYED: 57.6 Gal.

FLOW RATE CALIBRATED: 230 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-40 Underside
1-4, 37-40 Aftside
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
7	2500-2100	44	25	215
8	2500-2100	44	25	215

REMARKS: Openings same as Runs #3 and #4.

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 475 GPM

DATE: 4 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: C

ALTITUDE: 150 Feet

TIME OF RELEASE: 0443 Hours

AIRCRAFT COURSE: 360 Degrees

DURATION: 58 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 28 Blank		29	9.4	54	0.4		
		30	9.4	Stations 55 - 100 Blank			
		31	9.4				
		32	9.4				
		33	9.5				
		34	9.4				
		35	8.9				
		36	8.9				
		37	8.9				
		38	6.9				
		39	2.3				
		40	2.8				
		41	2.4				
		42	3.8				
		43	3.5				
		44	2.5				
		45	1.9				
		46	1.2				
		47	1.1				
		48	1.3				
		49	1.2				
		50	1.9				
		51	2.6				
		52	7.3				
		53	6.1				

Total 49.4

MASS DEPOSIT

MATERIAL: [illegible] Fuel Oil, 1 Purple

FLOW RATE: [illegible]

DATE: 6 July 1963

SYSTEM: [illegible]-1 [illegible]C-1

[illegible]: [illegible]

AIRSPEED: 13[illegible] Knots (15[illegible] mph)

SAMPLE LINE: C

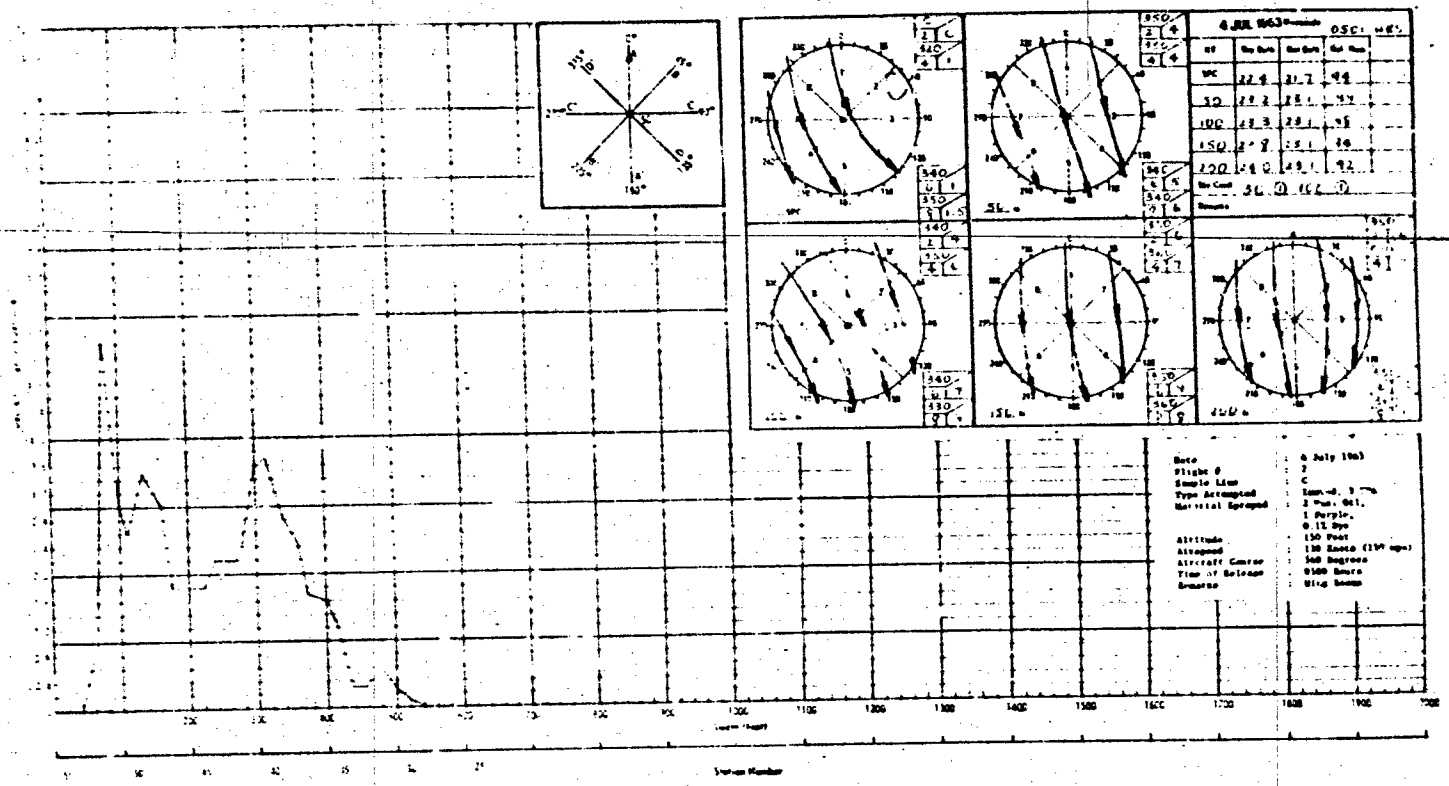
ALTITUDE: 15 [illegible]

TIME OF [illegible]AGE: [illegible]05 [illegible] Hours

AIRCRAFT COURSE: 3[illegible] Degrees

DURATION: [illegible] Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - [illegible]		[illegible]	.1				
		3	.5				
		31	.6				
		32	.3				
		33	.3				
		34	1.3				
		35	1.6				
		36	1.7				
		37	2.5				
		[illegible]	[illegible]				
		[illegible]	3.7				
		[illegible]	3.6				
		[illegible]	[illegible]				
		[illegible]	[illegible]				
		[illegible]	.2				
		[illegible]	1.[illegible]				
		[illegible]	1.[illegible]				
		[illegible]	1.[illegible]				
		[illegible]	[illegible]				
		[illegible]	[illegible]				
		[illegible]	[illegible]				
		[illegible]	[illegible]				
		[illegible]	[illegible]				
		[illegible]	5.5				
		[illegible]	1.				
		[illegible]	[illegible]				


Date
Flight #
Sample Line
Type Aerosol
Material Sprayed
Altitude
Aerosol
Aircraft Course
Time of Release
Source
6 July 1963
150 Feet
360 Degrees
Time Scale

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 4 July 1963

FLIGHT #: 3

SAMPLE LINE: C

TIME OF RELEASE: 0518 Hours

DURATION: 11 Sec.

FLOW RATE: 400 GPM

SYSTEM: C-123/MC-1

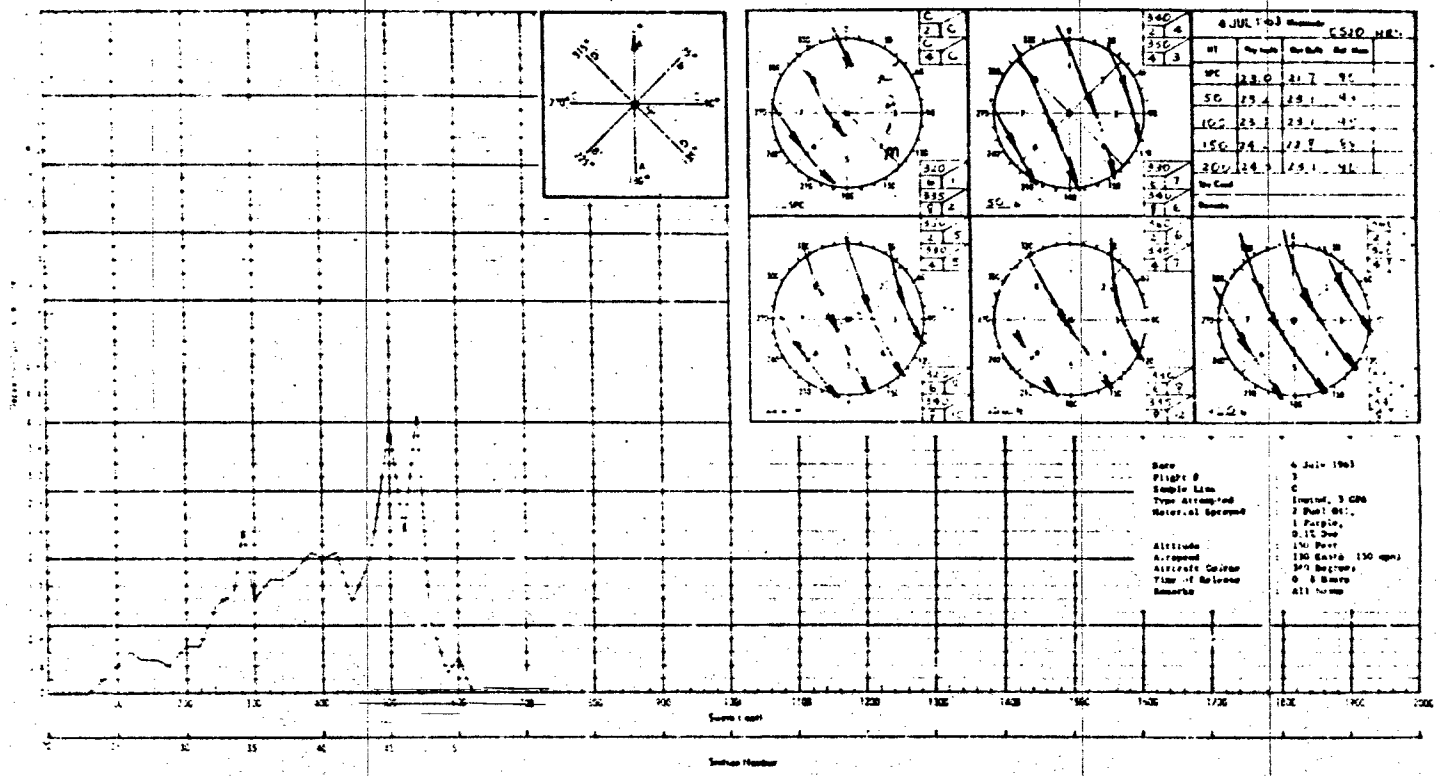
AIRSPEED: 130 Knots (150 mph)

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 360 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 23 Blank		26	0.6	Stations 51 - 100 Blank			
		27	0.5				
		28	0.5				
		29	0.4				
		30	0.7				
		31	0.7				
		32	1.3				
		33	1.5				
		34	2.4				
		35	1.4				
		36	1.7				
		37	1.7				
		38	1.8				
		39	2.1				
		40	2.0				
		41	2.1				
		42	1.4				
		43	1.9				
		44	2.6				
		45	3.9				
		46	2.4				
		47	4.1				
		48	1.1				
24	[illegible]	49	0.3				
25	0.4	50	0.5				

Total 34.2


Date
Flight #
Sample Line
Type Aircraft
Material Sprayed
Altitude
Aircraft Course
Time of Release
Remarks
Sample Number

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 425 GPM

DATE: 4 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: B

ALTITUDE: 150 1

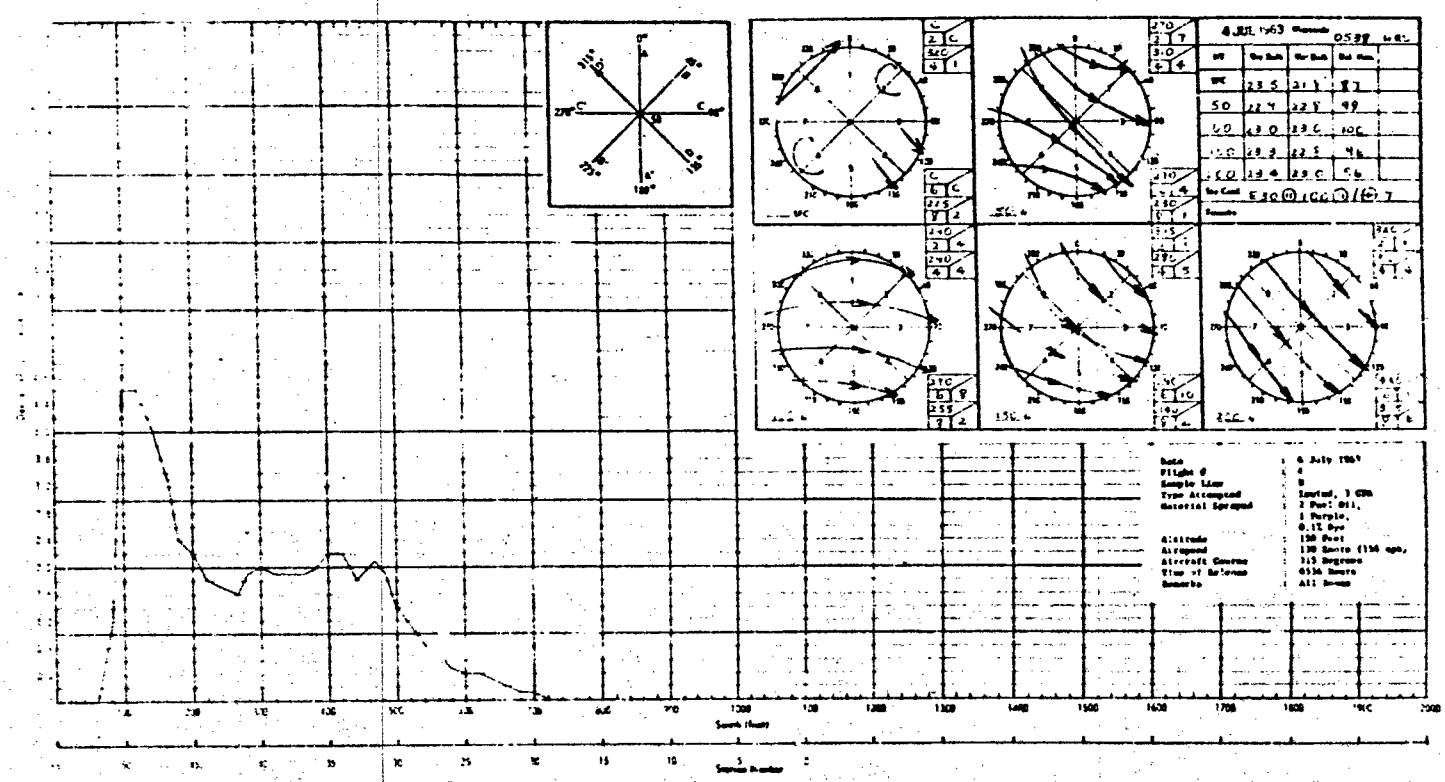
TIME OF RELEASE: 0536 Hours

AIRCRAFT COURSE:

DURATION: 15 Sec

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 19 Blank		20	0.1	45	2.2		
		21	0.1	46	2.4		
		22	0.2	47	3.3		
		23	0.3	48	4.0		
		24	0.4	49	3.6		
		25	0.4	50	4.6		
		26	0.5	51	1.2		
		27	0.7	52	0.0		
		28	0.8	Stations 53 - 100 Blank			
		29	1.1				
		30	1.4				
		31	1.7				
		32	2.1				
		33	1.8				
		34	2.2				
		35	2.2				
		36	2.0				
		37	1.9				
		38	1.9				
		39	1.9				
		40	2.0				
		41	1.9				
		42	1.6				
		43	1.7				
		44	1.8				

Total 90.2


Source Number

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 4 July 1963

FLIGHT #: 5

SAMPLE LINE: A

TIME OF RELEASE: 0555 Hours

DURATION: 11.4 Sec.

FLOW RATE: 2.5 GPM

SYSTEM: C-123/MC-1

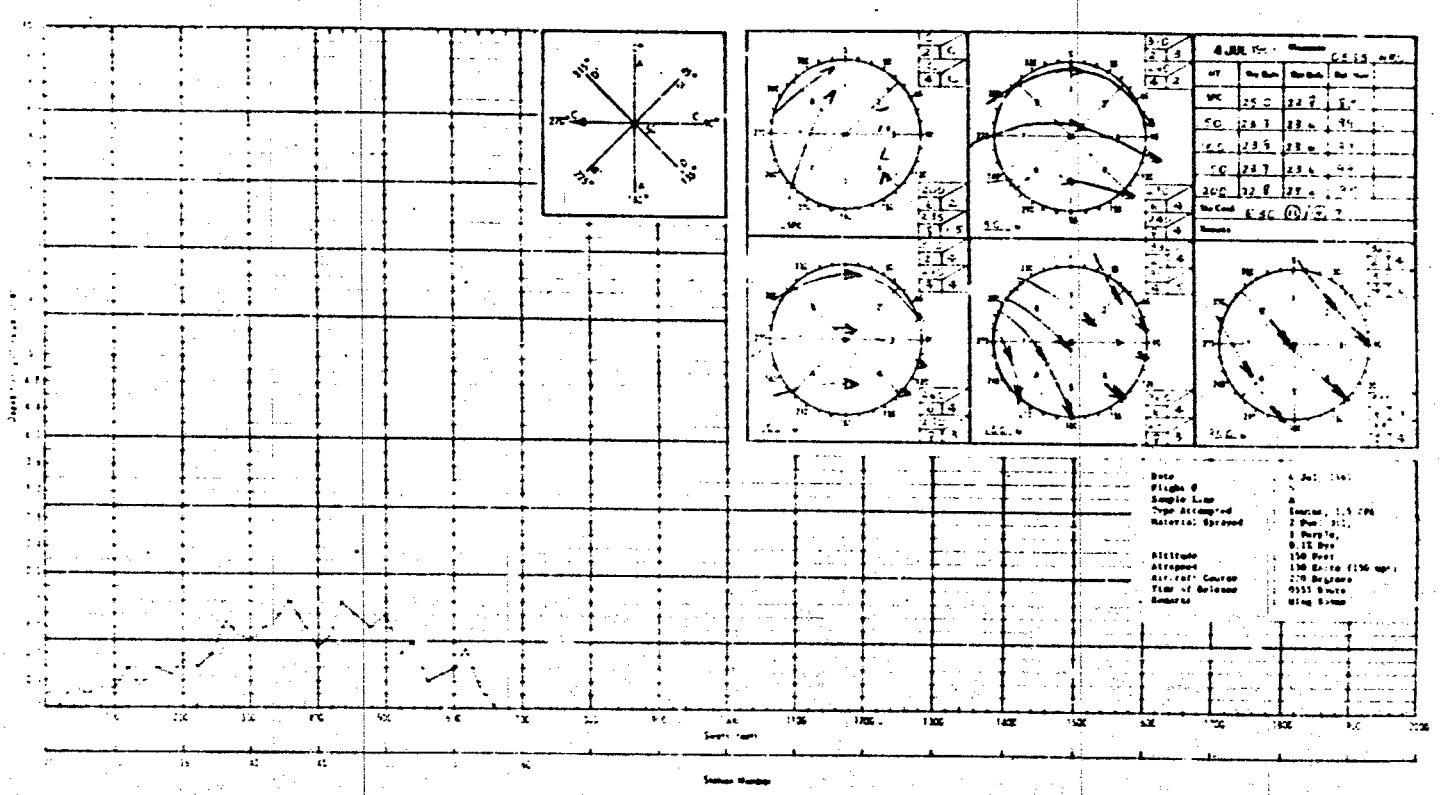
AIRSPEED: 130 Knots (150 mph)

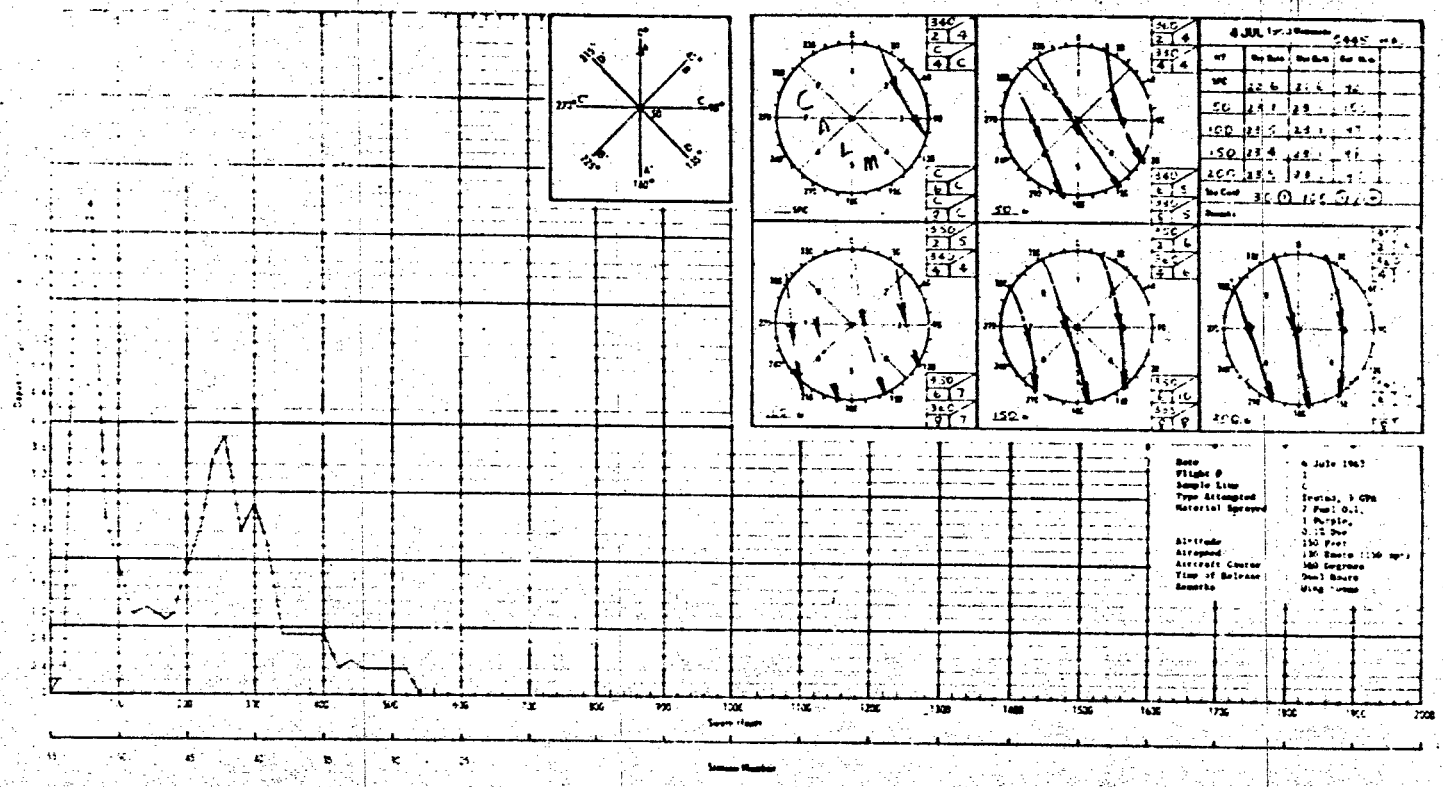
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 270 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 26 Blank				51	0.8		
		27	0.3	52	1.0		
		28	0.2	53	0.4		
		29	0.3	54	0.5		
		30	0.3	55	0.6		
		31	0.6	56	0.9		
		32	0.3	57	0.3		
		33	0.6	Stations 58 - 100 Blank			
		34	0.5				
		35	0.7				
		36	0.6				
		37	0.8				
		38	1.3				
		39	1.1				
		40	1.0				
		41	1.2				
		42	1.3				
		43	1.6				
		44	1.3				
		45	0.9				
		46	1.1				
		47	1.6				
		48	1.4				
		49	1.2				
		50	1.4				

Total 26.1


Station Number


Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
Sample Number

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 220 GPM

DATE: 4 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 6

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 Feet

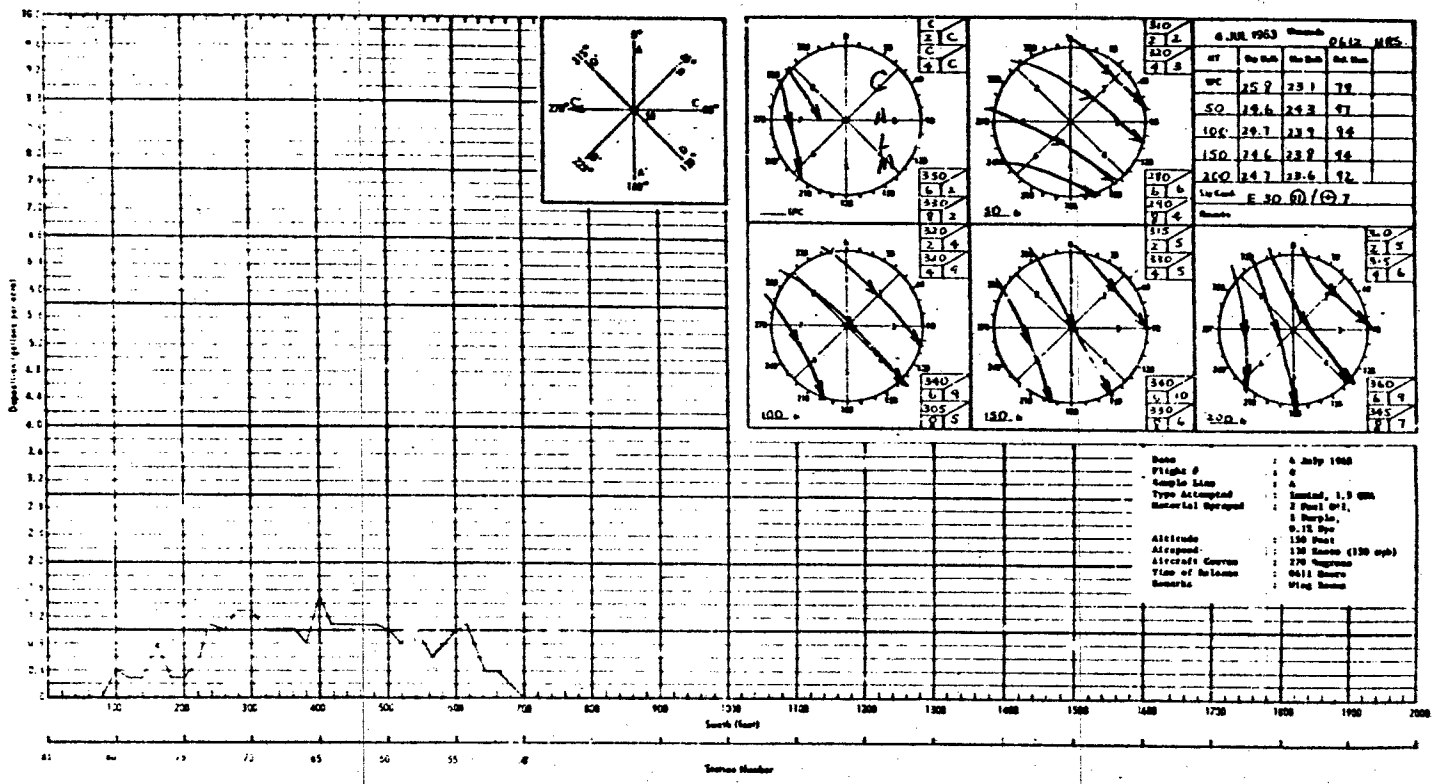
TIME OF RELEASE: 0611 Hours

AIRCRAFT COURSE: 270 Degrees

DURATION: 12.4 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 50 Blank				51	0.2	76	0.3
				52	0.4	77	0.8
				53	0.4	78	0.3
				54	1.1	79	0.3
				55	1.0	80	0.4
				56	0.8	81	0.0
				57	0.6	Stations 82 - 100 Blank	
				58	1.1		
				59	0.8		
				60	1.0		
				61	1.1		
				62	1.1		
				63	1.1		
				64	1.1		
				65	1.5		
				66	0.8		
				67	1.0		
				68	1.0		
				69	1.0		
				70	1.3		
				71	1.3		
				73	1.1		
				74	0.6		
				75	0.3		

Total [illegible]


Deposition (gallons per acre)
Search (feet)
Station Number
6 JUL 1963
0612 MDT
Date : 6 July 1963
Flight # : 6
Sample Line : A
Type Attempted : Seeded, 1.5 GPA
Material Sprayed : 2 Fuel Oil, 1 Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots (150 mph)
Aircraft Course : 270 Magnetic
Time of Release : 0611 Hours
Remarks : Plug Seeds

MASS DEPOSIT

MATERIAL 2 Fuel Oil, 1 Purple

FLOW RATE: 215 GPM

DATE: 4 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 7

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: B

ALTITUDE: 150 Feet

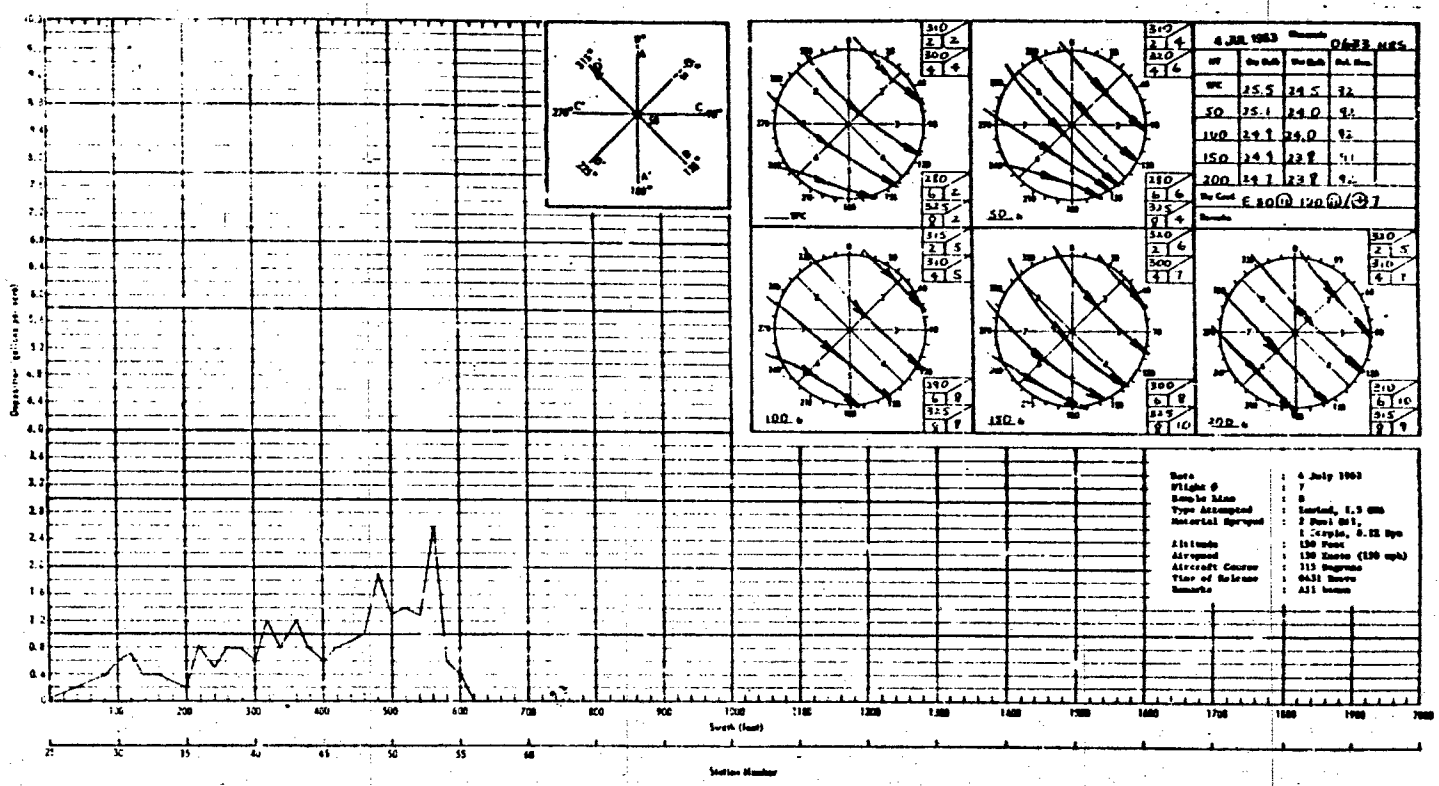
TIME OF RELEASE: 0631 Hours

AIRCRAFT COURSE: 315 Degrees

DURATION. 13.6 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 25 Blank		26	0.1	51	1.4		
		27	0.2	52	1.3		
		28	0.3	53	2.6		
		29	0.4	54	0.6		
		30	0.6	55	0.4		
		31	0.7	Stations 56 - 100 Blank			
		32	0.4				
		33	0.4				
		34	0.3				
		35	0.2				
		36	0.8				
		37	0.5				
		38	0.8				
		39	0.8				
		40	0.6				
		41	1.2				
		42	0.8				
		43	1.2				
		44	0.8				
		45	0.6				
		46	0.8				
		47	0.9				
		48	1.0				
		49	1.0				
		50	1.3				

Total 23.9


Deposition (gallons per acre)
Swath (feet)
Station Number
Date : 4 July 1963
Flight # : 7
Sample Line : 8
Type Attempted : Lowland, 1.5 GPA
Material Sprayed : 2 Part Oil, 1 Cerpin, 0.25 Dye
Altitude : 150 Feet
Airspeed : 130 Knots (150 mph)
Aircraft Course : 315 Degrees
Time of Release : 0631 Hours
Remarks : All known
4 JUL 1963
0633 MES
50.0
100.0
150.0
200.0

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 215 GPM

DATE: 4 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 8

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: B

ALTITUDE: 150 Feet

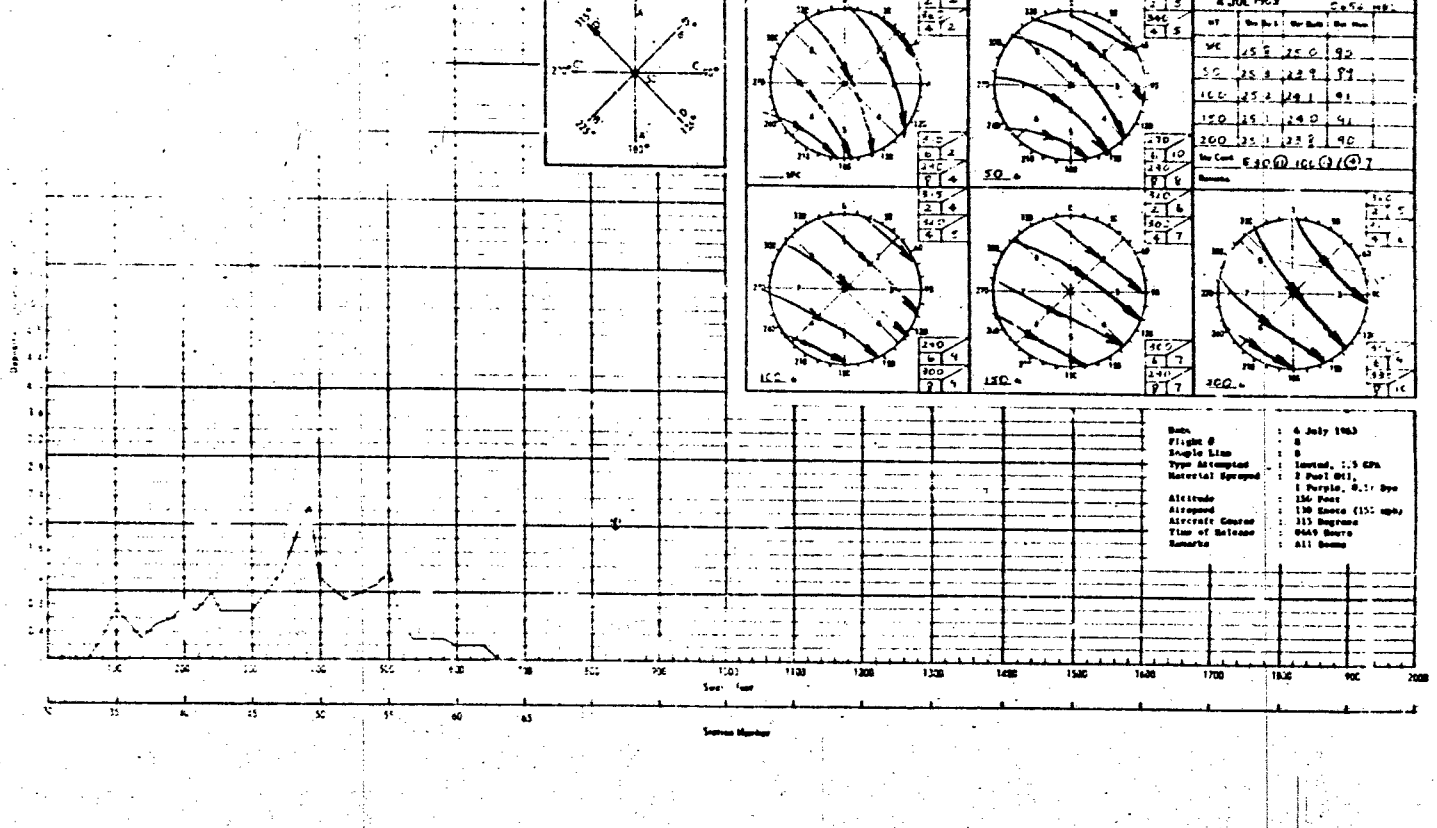
TIME OF RELEASE: 0649 Hours

AIRCRAFT COURSE: 315 Degrees

DURATION: 13.2 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 32 Blank		33	0.0	58	0.3		
		34	0.3	59	0.3		
		35	0.7	60	0.2		
		36	0.5	61	0.2		
		37	0.3	62	0.2		
		38	0.5	Stations 63 - 100 Blank			
		39	0.6				
		40	0.8				
		41	0.7				
		42	1.0				
		43	0.7				
		44	0.7				
		45	0.7				
		46	1.0				
		47	1.3				
		48	1.9				
		49	2.3				
		50	1.2				
		51	1.0				
		52	0.9				
		53	1.0				
		54	1.1				
		55	1.3				
		56	0.6				
		57	0.3				

Total 22.6


4 JUL 1963
Date : 4 July 1963
Flight # : 8
Sample Line : 8
Type Attempted : Isotond, 1.5 GPA
Material Sprayed : 2 Fuel Oil, 1 Purple, 0.1% Dye
Altitude : 156 Feet
Airspeed : 130 Knots (150 mph)
Aircraft Course : 315 Degrees
Time of Release : 0449 Hours
Remarks : All Downs

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 5 July 1963

DATE TEST FLOWN: 6 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 72

NOZZLE TYPE: Check valve only

LIQUID TEMP: 36° C @1500

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 86-54

PUMP R.P.M.: 350 -3100

FLOW METER READING: 510 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 520 GPM

TOTAL AMOUNT SPRAYED: 130 Gal.

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-40 Underside
1-4, 37-40 Aft side

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3400-3100	88	54	455
2	3500-2900	90	58	470

REMARKS: All odd numbered openings on underside of boom have ¼" check valve #6140.
All even numbered openings on underside of boom have ¼" check valve #6135.
All openings on aft side have ¼" check valve #6140.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 5 July 1963

DATE TEST FLOWN: 6 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 84

NOZZLE TYPE: Check valves only

LIQUID TEMP: 36° C @1515

DURATION OF SPRAY: 15 Secs.

PUMP PRESSURE: 74-40

PUMP R.P.M.: 3200-2700

FLOW METER READING: 495 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 488 GPM

NOZZLE CONFIGURATION: 1-4, 37-40 Aft side
WING: 1-7, 13-21, 29-40 Underside
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	3200-2600	75	42	460
4		76	42	460

REMARKS: All odd numbered openings on underside of boom have ½" check valve #6140.
All even numbered openings on underside of boom have ½" check valve #6135.
All openings on aft side have ½" check valve #6140.
All openings on tail boom are on aft side. Opening number 1-4 and 16-19 are ½" check valve #6135.
Openings numbered 5-15 are ½" check valve #6140.

C-123/MC-1 GROUND FLOW & PATTERN DATA

DATE TEST SPRAYED: 5 July 1963

DATE TEST FLOWN: 6 July 1963

TYPE SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 72

VALVES USED: Check valves only

LIQUID TEMP: 36° C

DURATION OF SPRAY: 15 Sec

PUMP PRESSURE: 75-30

PUMP R.P.M.: 3300-2700

FLOW METER READING: 295 GPM

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 296 GPM

TOTAL LIQUID SPRAYED: 74 Gal

NOZZLE CONFIGURATION: NOS: 1-7, 13-21, 29-49 Underside
1-4, 37-40 Aft side

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	3300-2700	75	30	290
6	3400-2800	77	30	300

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 5 July 1963

DATE TEST FLOWN: 6 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 84

NOZZLE TYPE: Check valves only

LIQUID TEMP: 36° C @1530

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 74 - 26

PUMP R.P.M.: 3250-2600

FLOW METER READING: 305 GPM

TOTAL AMOUNT SPRAYED: 75.5 Gal.

FLOW RATE CALIBRATED: 302 GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-40 Underside; 1-4, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
7	3400-2800	76	30	315

REMARKS: Check valves same as Runs 3 and 4.

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 455 GPM

DATE: 6 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: B

ALTITUDE: 150 Feet

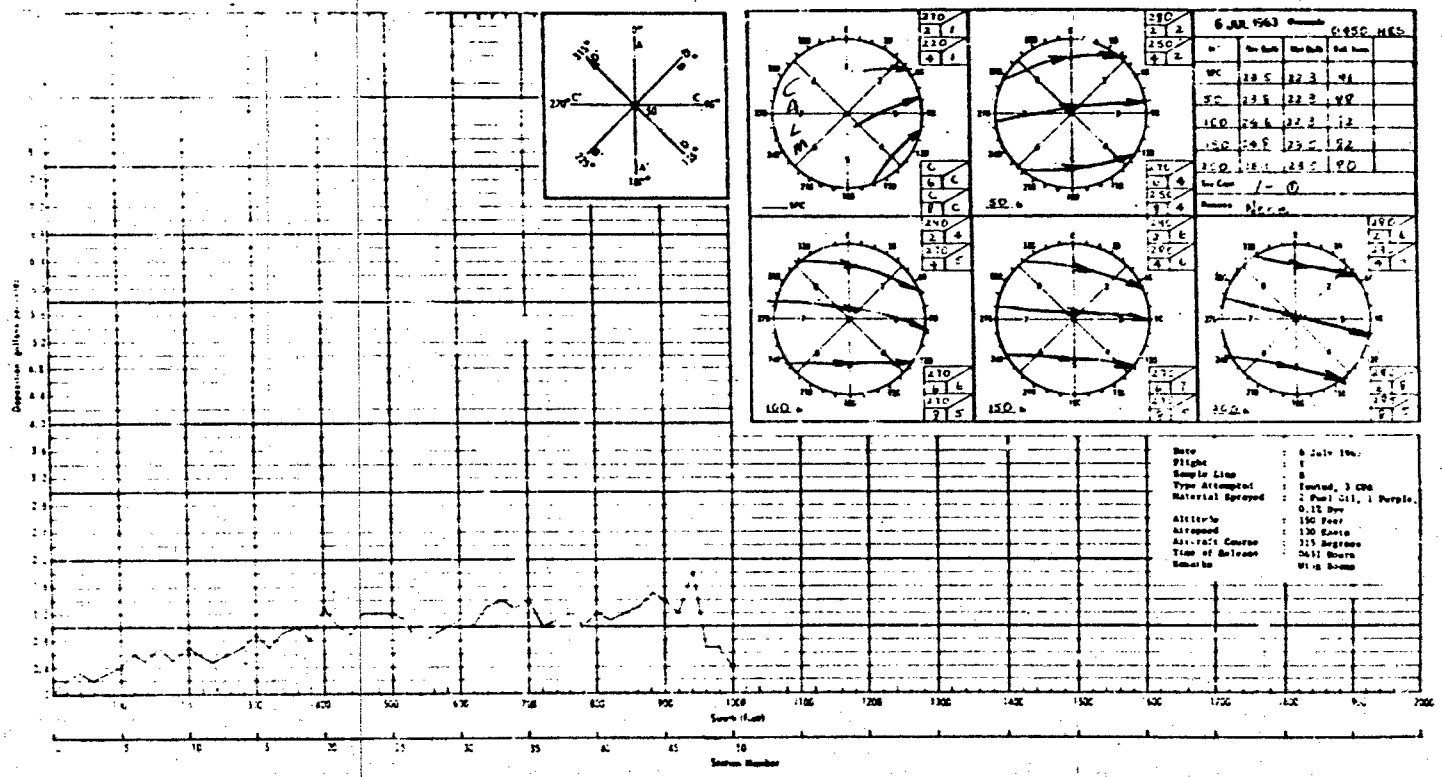
TIME OF RELEASE: 0451 Hour

AIRCRAFT COURSE: 315 Degrees

DURATION: 08.2 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.F.A.	STATION	G.P.A.
1	0.2	26	1.1	Stations 51 - 100 Blank			
2	0.3	27	0.7				
3	0.2	28	0.9				
4	0.3	29	1.0				
5	0.4	30	1.1				
6	0.6	31	1.0				
7	0.5	32	1.3				
8	0.7	33	1.4				
9	0.5	34	1.3				
10	0.7	35	1.4				
11	0.6	36	1.0				
12	0.5	37	1.1				
13	0.6	38	1.2				
14	0.7	39	1.0				
15	0.9	40	1.2				
16	0.7	41	1.1				
17	0.9	42	1.2				
18	1.0	43	1.3				
19	0.8	44	1.5				
20	1.3	45	1.4				
21	1.0	46	1.2				
22	0.9	47	1.8				
23	1.2	48	0.7				
24	1.2	49	0.7				
25	1.2	50	0.4				

Total 46.2


Deposition gallons per acre
Source (feet)
Source Number
Date
Flight
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
6 JUL 1963
0450 HRS
50 ft
100 ft
150 ft
200 ft

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 470 GPM

DATE: 6 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 2

AIRSPEED: 130 Knots (150 mph)

SAMPLE LINE: A

ALTITUDE: 150 Feet

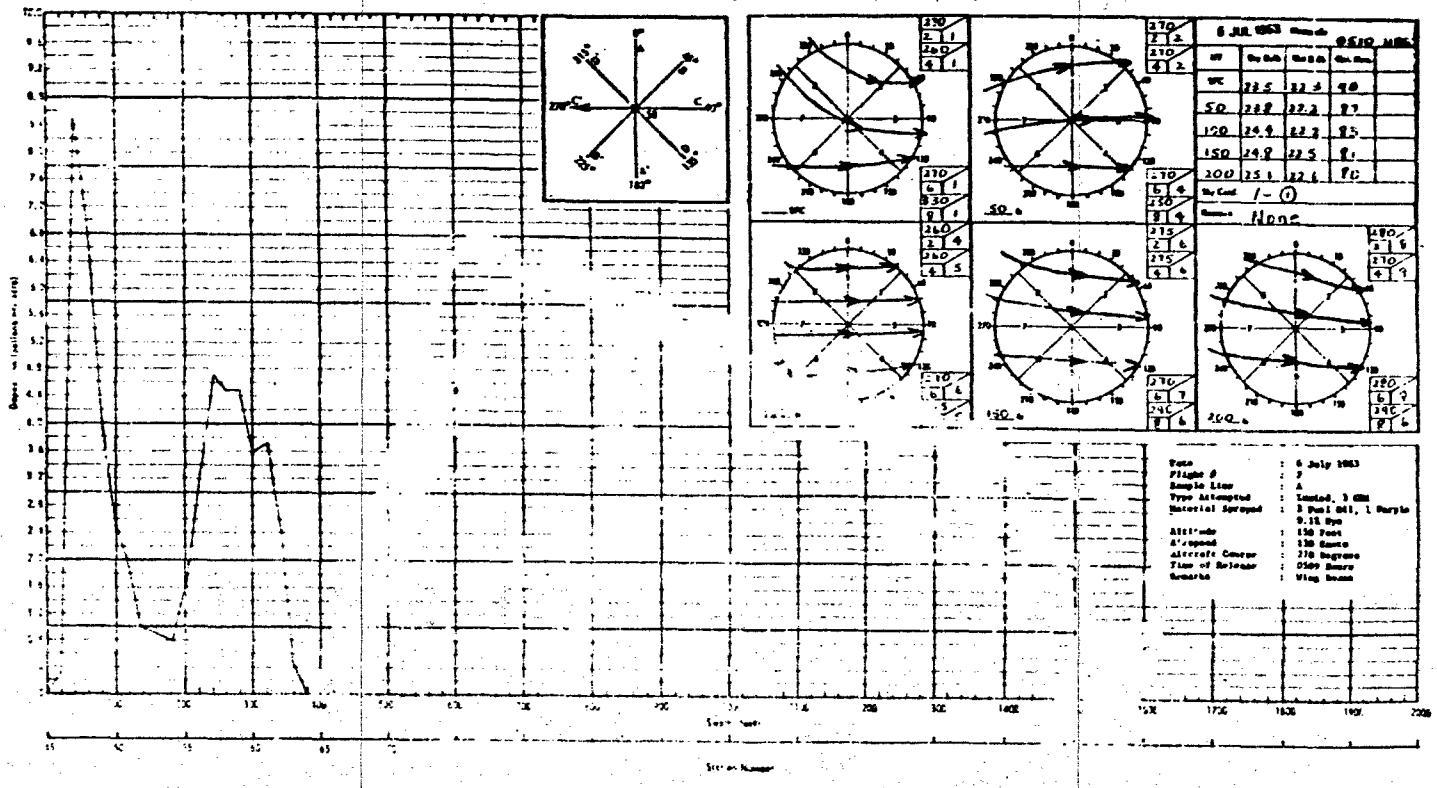
TIME OF RELEASE: 0500 Hours

AIRCRAFT COURSE: 270 Degrees

DURATION: 13 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 44 Blank				45	0.0		
				46	0.3		
				47	8.5		
				48	7.0		
				49	4.1		
				50	2.5		
				51	1.9		
				52	1.0		
				53	0.9		
				54	0.8		
				55	1.6		
				56	3.1		
				57	4.7		
				58	4.5		
				59	4.5		
				60	3.6		
				61	3.7		
				62	2.4		
				63	0.5		
				64	0.0		
				65	0.0		
				Stations 66 - 100 Blank			

Total 55.6


6 JUL 1963
0510 MST
SFC
50
100
150
200
Date : 6 July 1963
Flight # : 7
Sample Line : A
Type Attempted : Seeded, 3 GM
Material Sprayed : 3 Fuel Oil, 1 Purple
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 270 Degrees
Time of Release : 0509 Hours
Remarks : Wing Beam

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 460 GPM

DATE: 6 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 3

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

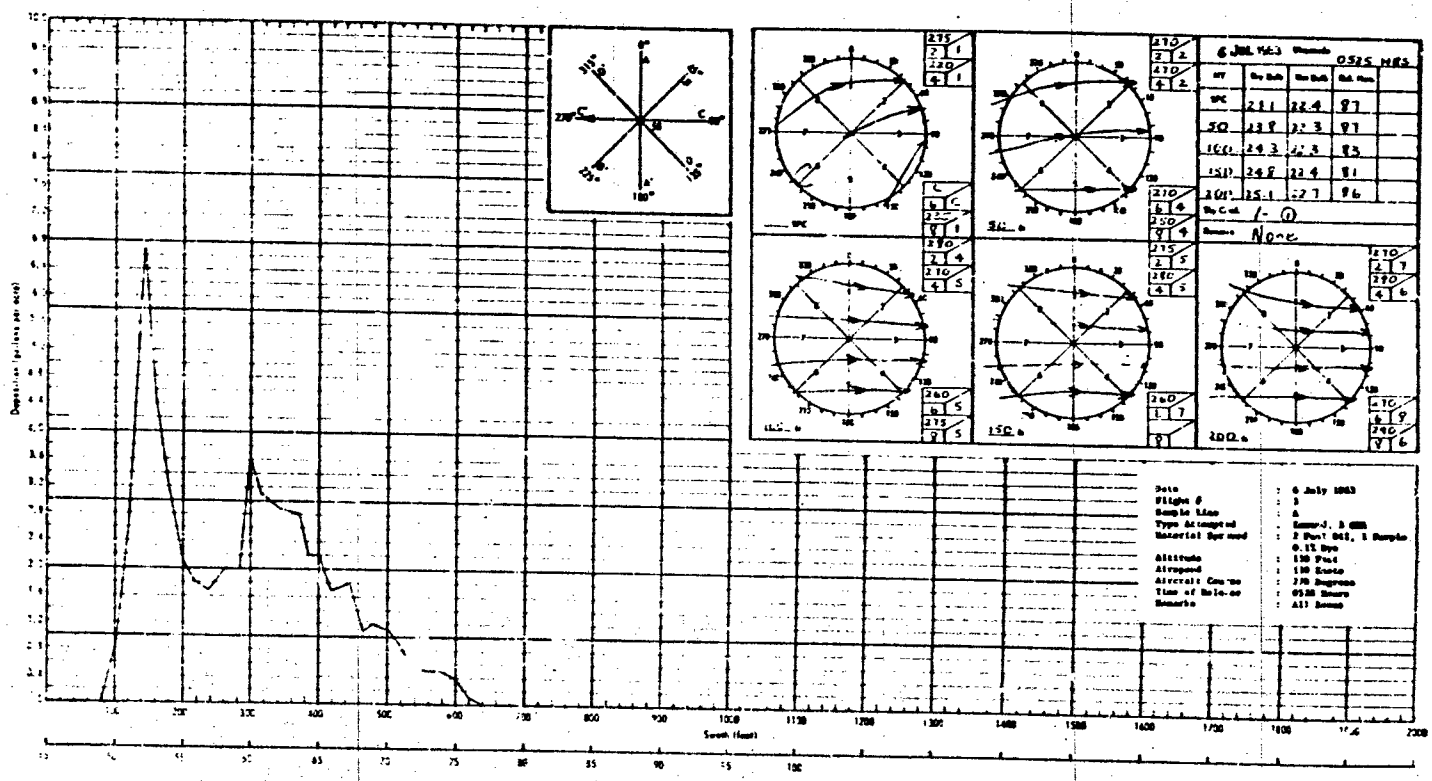
TIME OF RELEASE: 0528 Hours

AIRCRAFT COURSE: 270 Degrees

DURATION: 12.4 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 49 Blank				50	0.8	75	0.4
				51	2.6	76	0.1
				52	6.7	Stations 77 - 100 Blank	
				53	4.4		
				54	3.1		
				55	2.1		
				56	1.8		
				57	1.7		
				58	2.0		
				59	2.0		
				60	3.6		
				61	3.1		
				62	2.9		
				63	2.8		
				64	2.2		
				65	2.2		
				66	1.7		
				67	1.8		
				68	1.1		
				69	1.2		
				70	1.1		
				71	0.9		
				72	0.6		
				73	0.5		
				74	0.5		

Total 53.9


Deposition (pulses per sec)
South (feet)
6 JUL 1963
0525 HRS
None
Date : 6 July 1963
Flight # : 3
Sample Line : A
Type Accepted : Sonar-J, 3 GHz
Material Sprayed : 2 Part DAS, 1 Sample 0.15 Dye
Altitude : 130 Feet
Airspeed : 130 Knots
Aircraft Course : 270 Degrees
Time of Release : 0528 Hours
Remarks : All Seven

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 460 GPM

DATE: 6 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

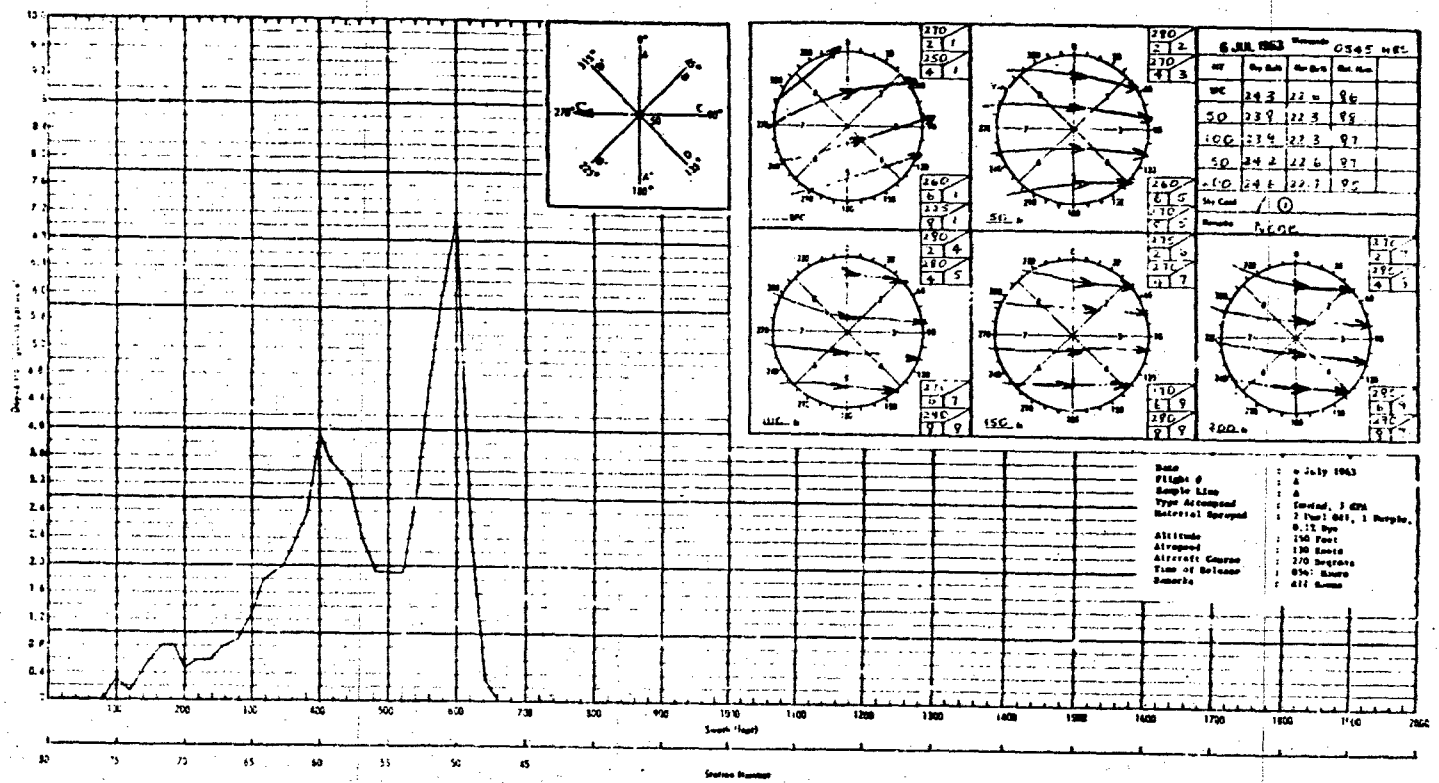
TIME OF RELEASE: 0547 Hours

AIRCRAFT COURSE: 270 Degrees

DURATION: 11.8 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 47 Blank				51	5.9	Stations 76 - 100	
				52	4.5	Blank	
				53	3.0		
				54	1.9		
				55	1.9		
				56	1.9		
				57	2.4		
				58	3.2		
				59	3.5		
				60	3.9		
				61	2.5		
				62	2.3		
				63	2.0		
				64	1.8		
				65	1.3		
				66	0.9		
				67	0.8		
				68	0.6		
				69	0.6		
				70	0.5		
				71	0.8		
				72	0.8		
		48	0.3	73	0.5		
		49	2.4	74	0.1		
		50	7.1	75	0.3		

Total 56.4


Date : 6 July 1963
Flight # : A
Sample Line : A
Type Accomplished : Sondes, 3 GPA
Material Sprayed : 2 Pint DDT, 1 Dieldrin, 0.1% Dye
Altitude : 250 Feet
Airspeed : 130 Knots
Aircraft Course : 270 Degrees
Time of Release : 0545 Hours
Remarks : All Sunny
6 JUL 1963
0545 HRS
Remarks
Sky Cond
Smooth Height
Station Number

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 290 GPM

DATE: 6 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 5

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

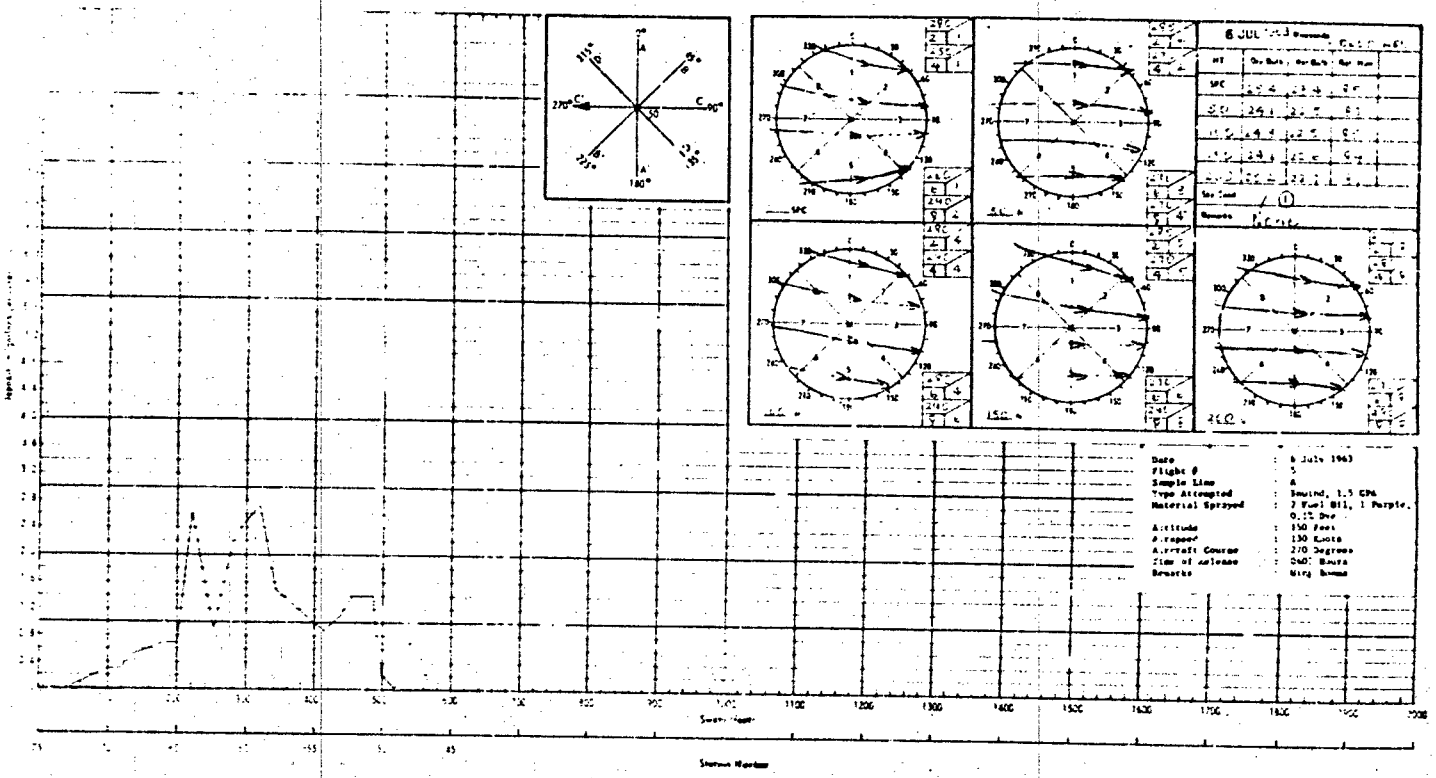
TIME OF RELEASE: 0603 Hours

AIRCRAFT COURSE: 270 Degrees

DURATION: 11 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 49 Blank				50	0.2		
				51	1.4		
				52	1.4		
				53	1.1		
				54	0.9		
				55	1.0		
				56	1.2		
				57	1.5		
				58	1.7		
				59	2.7		
				60	2.5		
				61	2.2		
				62	0.9		
				63	1.4		
				64	2.6		
				65	0.7		
				66	0.7		
				67	0.6		
				68	0.5		
				69	0.3		
				70	0.3		
				71	0.2		
				72	0.1		
				Stations 73 - 100 Blank			

Total 26.1


Date : 6 July 1963
Flight # : 5
Sample Line : 6
Type Attempted : Swathd, 1.5 GPA
Material Sprayed : 7 Fuel Oil, 1 Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 270 Degrees
Time of Release : 0400 Hours
Remarks : Wing Bumps

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 300 GPM

DATE: 6 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 6

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

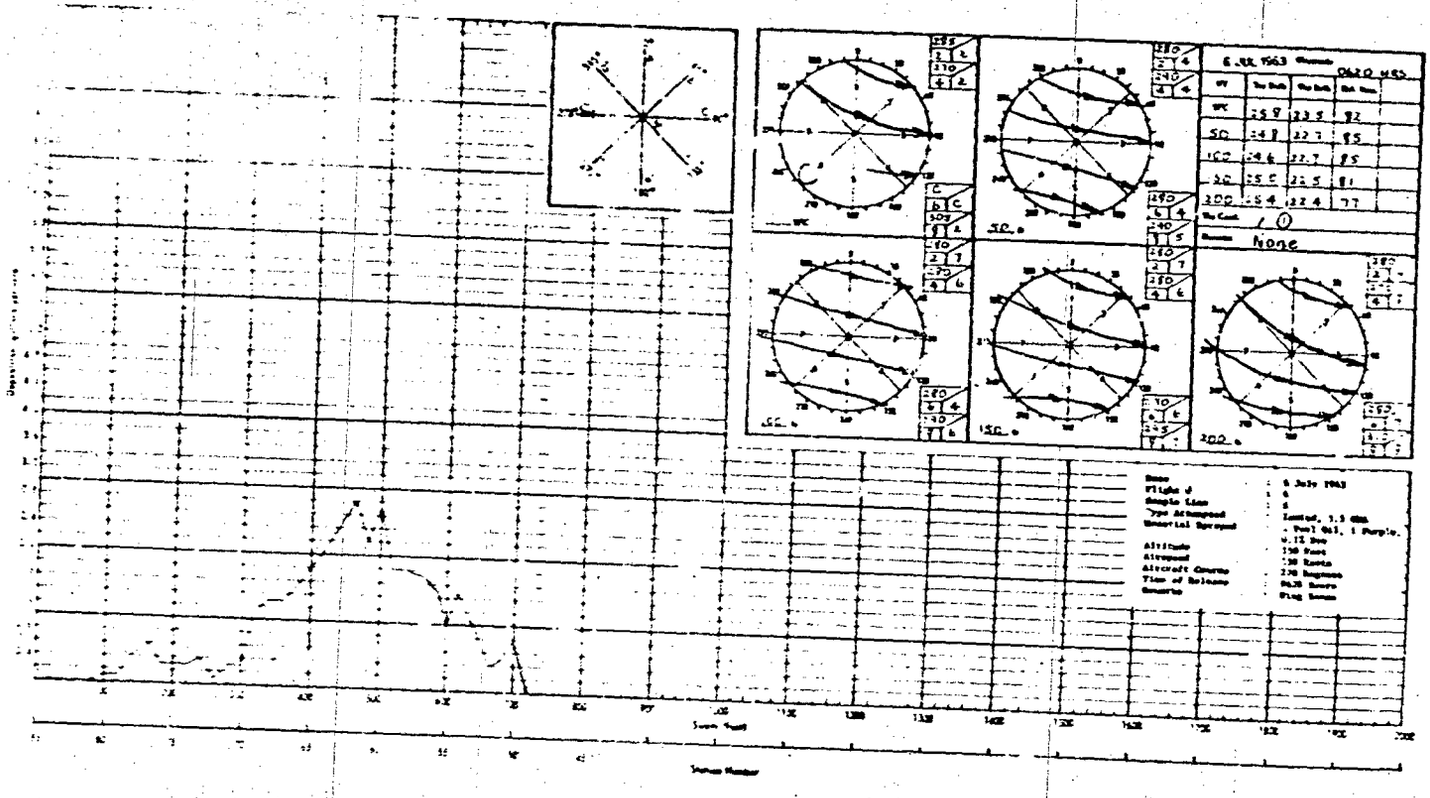
TIME OF RELEASE: 0620 Hours

AIRCRAFT COURSE: 270 Degrees

DURATION: 11 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 49 Blank				50	0.8	75	0.3
				51	0.5	76	0.3
				52	0.4	77	0.6
				53	1.0	78	0.4
				54	1.5	79	0.1
				55	1.0	80	0.1
				56	1.5	Stations 81 - 100 Blank	
				57	1.7		
				58	1.8		
				59	1.8		
				60	2.7		
				61	2.2		
				62	2.8		
				63	2.4		
				64	2.0		
				65	1.8		
				66	1.5		
				67	1.3		
				68	1.3		
				69	1.1		
				70	0.3		
				71	0.3		
				72	0.1		
				73	0.4		
				74	0.3		

Total 34.3


6 JUL 1963
0620 MSD
None
Date
Flight #
Sample Size
Type Attempted
Unusual Occurrence
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
6 July 1963
Initial, 1.5 min
Pull Out, 1 Purple,
0.12 Sec
150 Feet
130 Knots
230 Degrees
0620 Hours
Flag Issue

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 6 July 1963

FLIGHT #: 7

SAMPLE LINE: A

TIME OF RELEASE: 0636 Hours

DURATION: 12.8 Sec.

FLOW RATE: 31[illegible] GPM

SYSTEM: C-123/M[illegible]

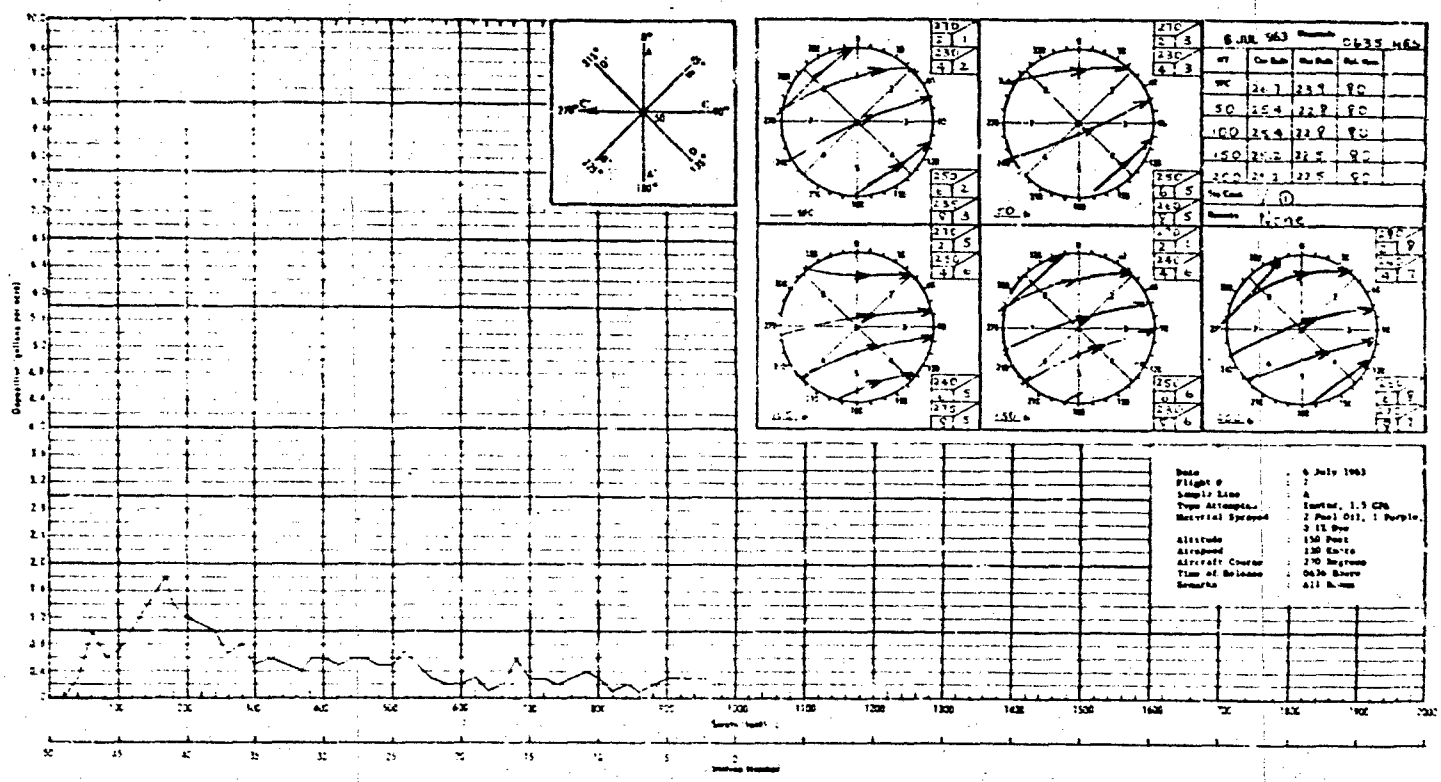
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 270 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	0.2	26	0.5				
2	0.3	27	0.6				
3	0.3	28	0.6				
4	0.3	29	0.5				
5	0.3	30	0.6				
6	0.2	31	0.6				
7	0.1	32	0.4				
8	0.2	33	0.5				
9	0.1	34	0.6				
10	0.3	35	0.5				
11	0.4	36	0.8				
12	0.3	37	0.7				
13	0.2	38	1.0				
14	0.3	39	1.1				
15	0.3	40	1.2				
16	0.6	41	1.4				
17	0.2	42	1.8				
18	[illegible]	43	1.4				
19	0.3	44	1.[illegible]				
20	0.2	45	0.7				
21	0.2	46	0.6				
22	0.3	47	1.0				
23	0.5	48	0.3				
24	0.7	Stations 49 - 100 Blank					
25	0.5						

Total: 25.8


Deposition (gallons per acre)
Sample Number
6 JUL 1963
0635 HRS
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963 | DATE TEST FLOWN: 9 July 1963 | [illegible]

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple | TOTAL NOZZLES OPEN: 96 | EN: [illegible]

NOZZLE TYPE: Check valve only | LIQUID TEMP: 33° C | 33°

DURATION OF SPRAY: 15 Sec. | PUMP PRESSURE: 74-40 | 74-

PUMP R.P.M.: 3250-2700 | FLOW METER READING: 500 GPM | NG: [illegible]

NO. OF PUMPS: 2 | FLOW RATE CALIBRATED: 512 GPM | ATED: [illegible]

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-42 Underside; 1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN#	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER	GPM FL
1	3200-2600	75	36	450	45
5	3550-3000	84	50	530	53

REMARKS: All odd numbered openings on underside of boom have ¼" check valve [illegible]" che
#6140.
All even numbered openings on underside of boom have ½" check valve [illegible] ½" ch
#6135.
All openings on aft side have ¼" check valve #6140.
All openings on tail boom are on aft side.
Opening number 1-4 and 16-19 are ¼" check valve #6135. [illegible]
Openings numbered 5-15 are ½" check valve #6140.
Tail check valves flow are perpendicular to air stream. [illegible]m.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963

DATE TEST FLOWN: 9 July 1

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 84

NOZZLE TYPE: Check valve only

LIQUID TEMP: 34° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 73-28

PUMP R.P.M.: 3350-2650

FLOW METER READING: 290

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 292

TOTAL AMOUNT SPRAYED: 73 GAL

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-42 Underside
1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
2	3500-?	87		315

REMARKS: All odd numbered openings on underside of boom have ½" check valve have ½ 6140.
All even numbered openings on underside of boom have ½" check valve have #6135.
All openings on aft side have ½" check valve #6140.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963

DATE TEST FLOWN:

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPE

NOZZLE TYPE: Check valve only

LIQUID TEMP

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE

PUMP R.P.M.: 3250-2600

FLOW METER READIN

NO. OF PUMPS: 1

FLOW RATE CALIBRA

TOTAL AMOUNT SPRAYED: 72.5 Gal.

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-42 Underside
1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM
3	3400-3000	84	28	

REMARKS: Nozzles same as Runs #1 and #5.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963

DATE TEST FLOWN: 9 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN 96

NOZZLE TYPE: Check valve only

LIQUID TEMP:

DURATION OF SPPAY: 15 Sec.

PUMP PRESSURE: 72-24

PUMP R.P.M.: 3250-2600

FLOW METER READING: 300 GPM

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 290 GPM

TOTAL AMOUNT SPRAYED: 72.5 Gal.

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-42 Underside
1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	3400-3000	84	28	320

REMARKS: Nozzles same as Runs #1 and #5.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963

DATE TEST FLOWN: 9 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 84

NOZZLE TYPE: Check valves only

LIQUID TEMP: 31° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 83-48

PUMP R.P.M.: 3500-2900

FLOW METER READING: 500 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 494 GPM

TOTAL AMOUNT SPRAYED: 123.5 Gal.

NOZZLE CONFIGURATION: 1-7, 13-21, 29-42 Underside
WING: 1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
4	3500-2900	85	50	460

REMARKS: Check valves same as Run #2.

MASS MEDIAN DIAMETER

DATE: 9 July 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 5 PAPER: Kromekote, white

SAMPLE LINE: A MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 530 CPM SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
49	1	9000			
57	8	6700			
51	3	6100*			
61	9	5900			
51	2	5800	79	1A	100(smallest)
50	4	5700			
53	6	5600			
64	10	5500			
51	5	5400			
50	7	5300			
50	11	5200			

$$MMD = \frac{67.7240.1420(\text{Spot D Max})}{\text{Con. Factor} = 2.5} = \frac{6100}{6.355 \times 2.2} = 373.6 \text{ Microns}$$

$$\text{Max. Sph. Dia.} = 67.7240.1420(9000) = \frac{9000}{6.430} = 1345.7 \text{ Microns}$$

Min. Sph. Dia. = 63 Microns

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 9 July 1963

FLIGHT #: 1

SAMPLE LINE: C

TIME OF RELEASE: 0456 Hours

DURATION: 12 Sec.

FLOW RATE: 450 GPM

SYSTEM: C-123/MC-1

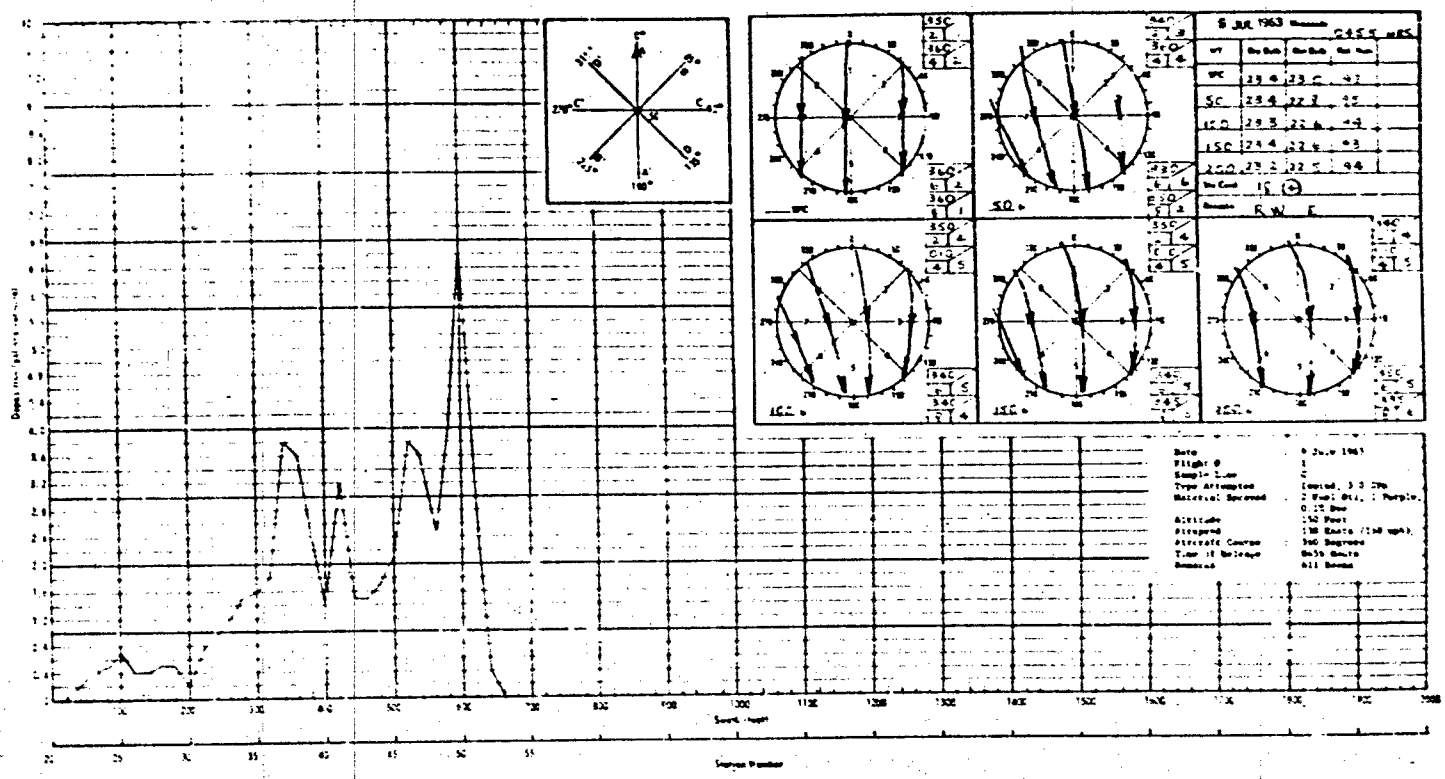
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 360 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 21 Blank		22	0.2	47	3.6		
		23	0.4	48	2.5		
		24	0.5	49	4.0		
		25	0.7	50	6.6		
		26	0.4	51	2.5		
		27	0.4	52	0.4		
		28	0.5	Stations 53 - 100 Blank			
		29	0.5				
		30	0.2				
		31	0.8				
		32	1.0				
		33	1.3				
		34	1.5				
		35	1.6				
		36	1.8				
		37	3.8				
		38	3.6				
		39	2.5				
		40	1.4				
		41	3.2				
		42	1.5				
		43	1.5				
		44	1.7				
		45	2.1				
		46	3.8				

Total 56.5



MASS DEPOSITS

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 315 GPM

DATE: 9 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 2

AIRSPEED: 130 Knots

SAMPLE LINE: C

ALTITUDE: 150 Feet

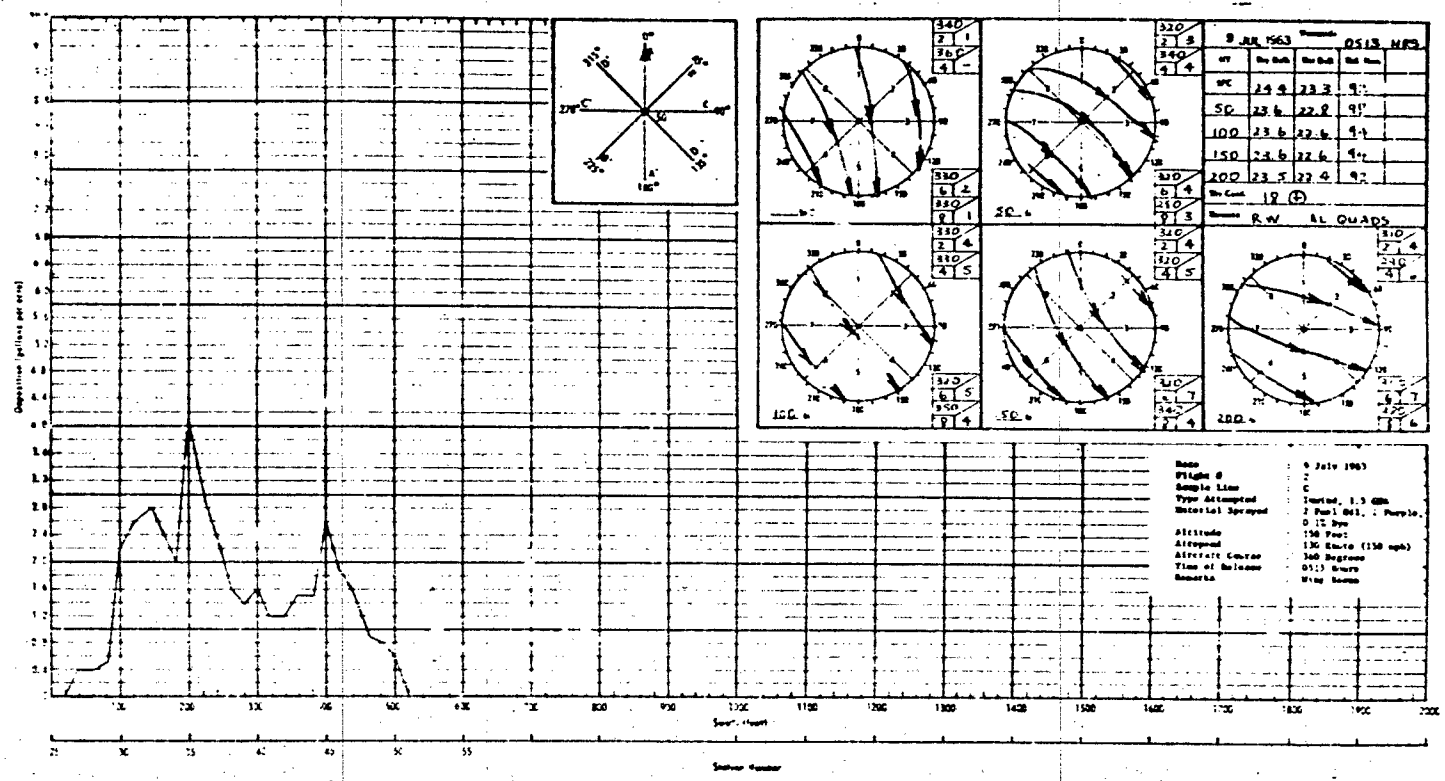
TIME OF RELEASE: 0513 Hours

AIRCRAFT COURSE: 360 Degrees

DURATION: 12 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 25 Blank		26	0.0				
		27	0.4				
		28	0.4				
		29	0.5				
		30	2.2				
		31	2.6				
		32	2.8				
		33	2.4				
		34	2.0				
		35	4.1				
		36	2.9				
		37	2.2				
		38	1.6				
		39	1.4				
		40	1.6				
		41	1.2				
		42	1.2				
		43	1.5				
		44	1.5				
		45	2.6				
		46	1.9				
		47	1.6				
		48	0.9				
		49	0.8				
		50	0.6				

Total 40.9


9 JUL 1963
0513 HRS
RW ALL QUADS
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 320 GPM

DATE: 9 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 3

AIRSPEED: 130 Knots

SAMPLE LINE: B

ALTITUDE: 150 Feet

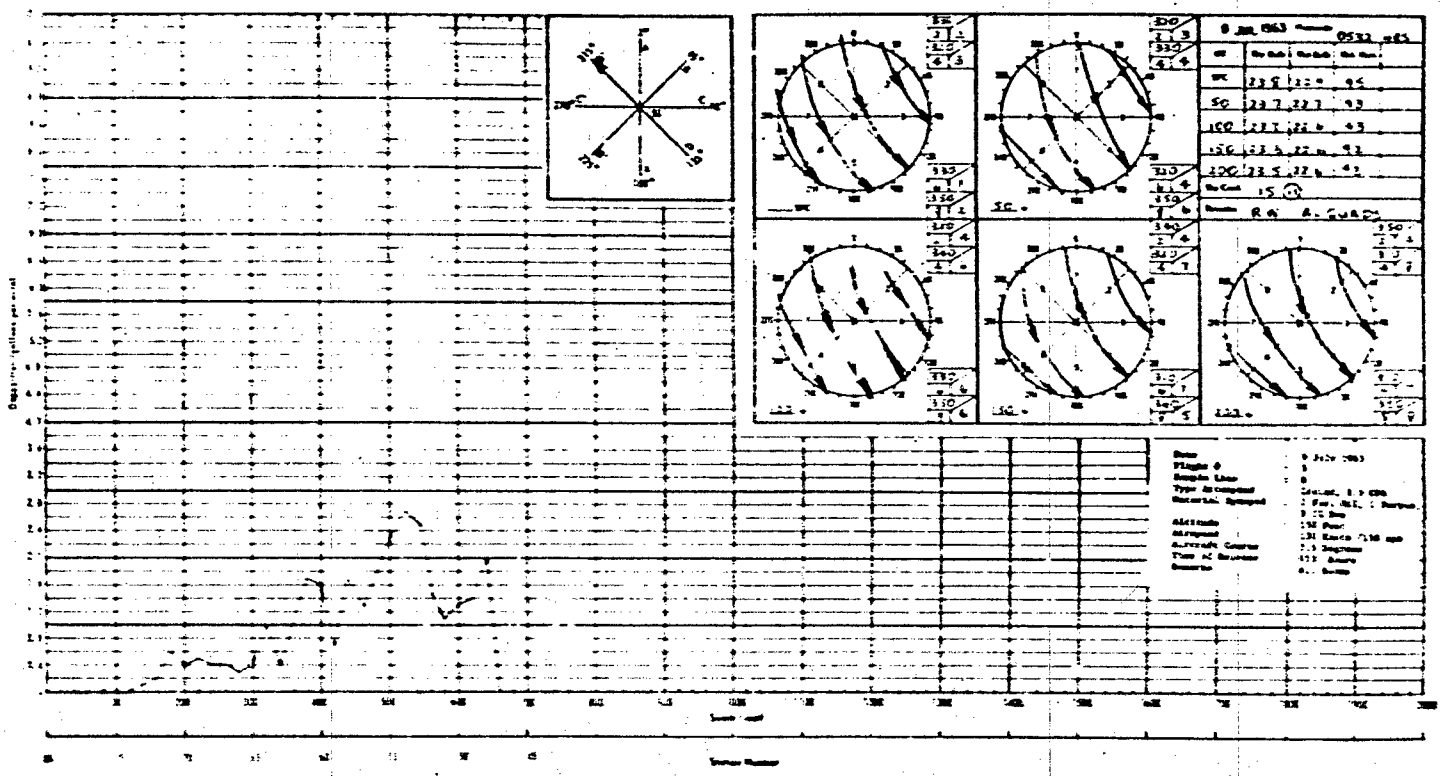
TIME OF RELEASE: 0535 Hours

AIRCRAFT COURSE: 315 Degrees

DURATION: 15 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 46 Blank				52	1.5		
				53	2.5		
				54	2.7		
				55	2.3		
				56	1.8		
				57	1.3		
				58	1.7		
				59	0.7		
				60	1.6		
				61	1.7		
				62	1.1		
				63	0.4		
				64	1.0		
				65	0.4		
				66	0.3		
				67	0.4		
				68	0.4		
				69	0.5		
				70	0.4		
				71	0.6		
		47	0.0	72	0.2		
		48	2.0	73	0.1		
		49	1.4	74	0.0		
		50	1.3	75	0.0		
		51	1.1	76	0.0		

Total 29.4



MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 9 July 1963

FLIGHT #: 4

SAMPLE LINE: B

TIME OF RELEASE: 0551 Hours

DURATION: 13 Sec.

FLOW RATE: 460 GPM

SYSTEM: C-123/MC-1

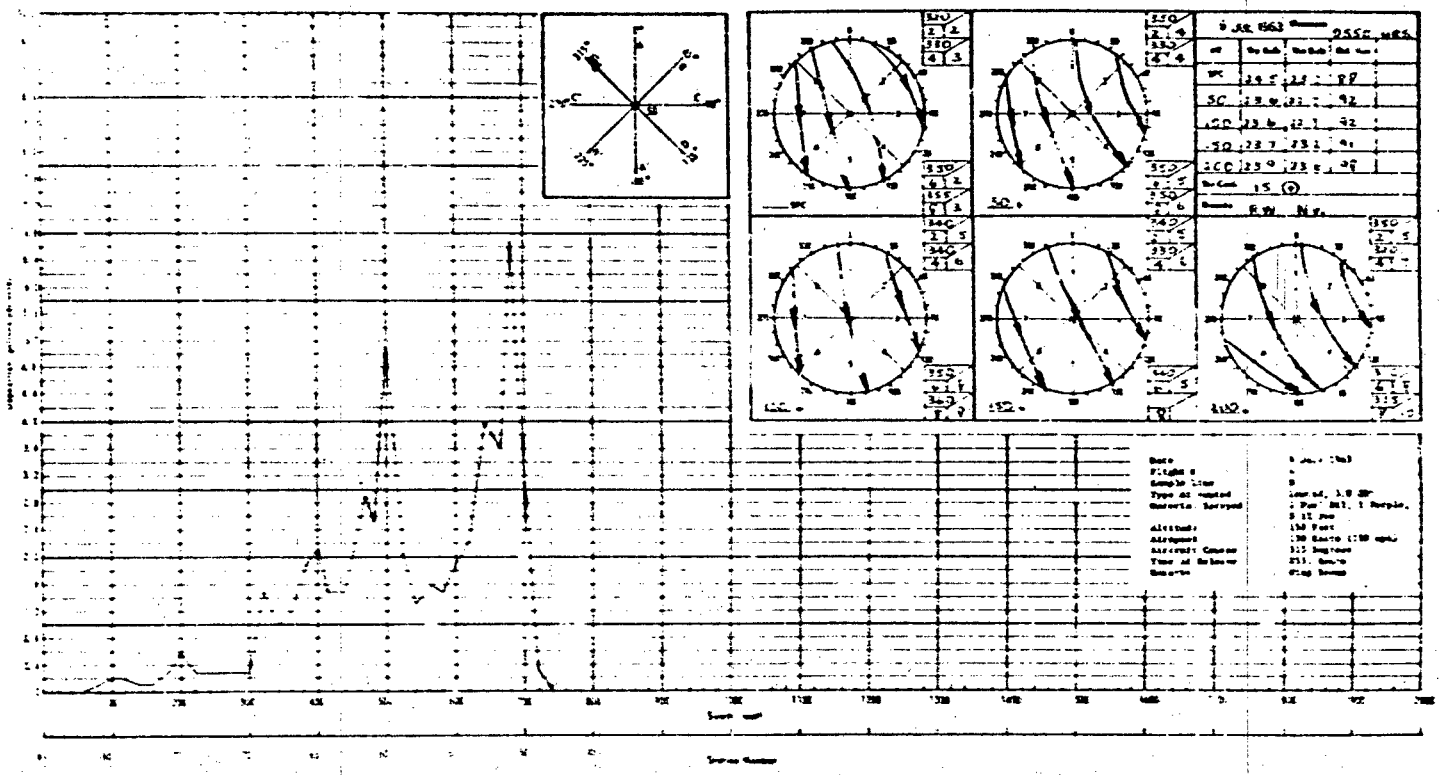
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 315 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 48 Blank				49	0.3	74	0.3
				50	3.1	75	0.6
				51	6.7	76	0.3
				52	3.6	77	0.1
				53	4.0	78	0.1
				54	2.2	79	0.2
				55	1.9	80	0.2
				56	1.5	81	0.1
				57	1.6	82	0.0
				58	1.3	83	0.0
				59	2.0	84	0.0
				60	5.1	Stations 85 - 100	
				61	2.5	Blank	
				62	2.9		
				63	1.5		
				64	1.5		
				65	2.1		
				66	1.9		
				67	1.2		
				68	1.0		
				69	1.5		
				70	0.3		
				71	0.3		
				72	0.3		
				73	0.3		

Total 52.5



MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 530 GPM

DATE: 9 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 5

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

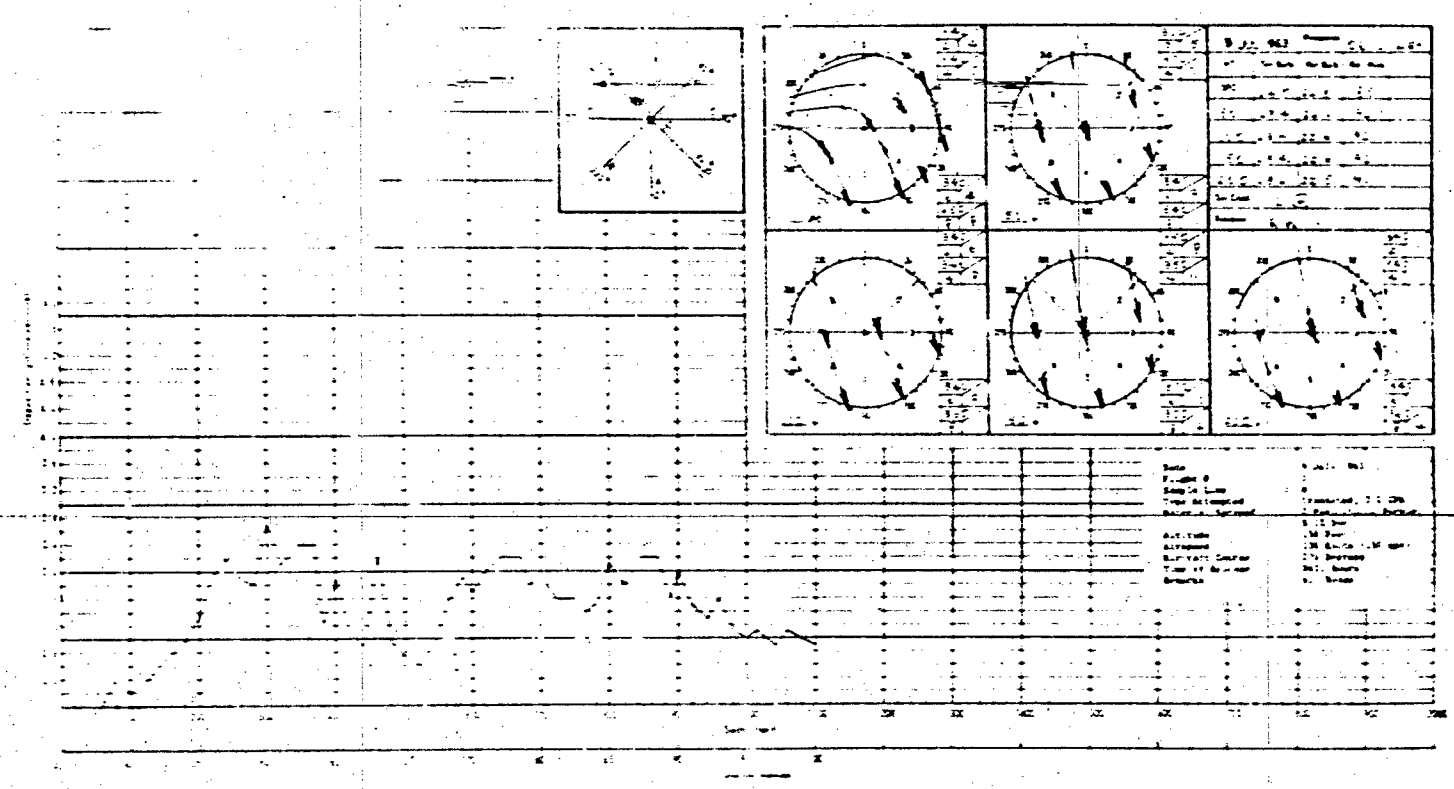
TIME OF RELEASE: 0611 Hours

AIRCRAFT COURSE: 270 Degrees

DURATION: 12 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 48 Black				51	0.3	76	2.0
				52	0.5	77	2.2
				53	0.7	78	2.2
				54	1.0	79	1.8
				55	1.3	80	1.9
				56	1.9	81	1.6
				57	2.2	82	1.6
				58	1.9	83	1.4
				59	1.8	84	1.5
				60	2.7	85	2.1
				61	2.1	86	1.8
				62	2.4	87	2.2
				63	2.4	88	2.2
				64	1.2	89	1.6
				65	1.9	90	2.0
				66	1.1	91	1.5
				67	0.9	92	1.3
				68	2.2	93	1.6
				69	0.9	94	1.1
				70	0.7	95	1.0
				71	0.6	96	1.1
				72	0.9	97	0.9
				73	1.6	98	1.1
		49	0.4	74	1.9	99	1.0
		50	0.2	75	1.7	100	0.9

Total 77.0



C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963

DATE TEST FLOWN: 17 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 96

NOZZLE TYPE: Check valve only

LIQUID TEMP: 33° C

DURATION OF SPRAY: 15 Sec

PUMP PRESSURE: 74-40

PUMP R.P.M.: 1250-2700

FLOW METER READING: 500 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 512 GPM

TOTAL AMOUNT SPRAYED: 138 Gal

NOZZLE CONFIGURATION: WING: 1-7, 13-21, 29-42 Underside; 1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3550-3000	86	64	570
4	3300-2200	76	28	460

REMARKS: All odd numbered openings on underside of boom have ½" check valve #6140.
All even numbered openings on underside of boom have ½" check valve #6135.
All openings on aft side have ½" check valve #6140.
All openings on tail boom are on aft side. Opening number 1-4 and 16-19 are ½" check valve #6135. Openings numbered 5-15 are ½" check valve #6140.
Tail check valves flow are perpendicular to air stream.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963

DATE TEST FLOWN: 17 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 44

NOZZLE TYPE: Check valve only

LIQUID TEMP. 31° C

DURATION OF SPRAY: 15 Sec

PUMP PRESSURE: 83-48

PUMP R.P.M.: 3500-2900

FLOW METER READING: 500 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 636 GPM

TOTAL AMOUNT SPRAYED: 123.5 Gal

NOZZLE CONFIGURATION: WING: 1-7, 13-21 29-42 Underside
1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
2	3500-3000	83	52	470
3	3500-2000	83	54	425

REMARKS: All odd numbered openings on underside of wing have 2" check valve model 6340
All [illegible] numbered openings on underside [illegible] #6135
All openings on aft side have 2" check valve #6140

C-121/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1961

DATE TEST FLOWN: 7 July 1961

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 96

NOZZLE TYPE: Check valve only

LIQUID TEMP: ----

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 22-24

PUMP R.P.M.: 3250-2600

FLOW METER READING: 300 GPM

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 290 GPM

TOTAL AMOUNT SPRAYED: 72.5 Gal.

NOZZLE CONFIGURATION:
WING: 1-7, 13-21, 29-42 Underside
1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	3300-2800	Pressure gauge out on forward pump		305
7	3300-2800	Same as Run #5		300

REMARKS: Same as Runs #1 and #4.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 8 July 1963

DATE TEST FLOWN: 17 July 1963

LIQUID SPRAYED: 2 Fuel Oil, 1 Purple

TOTAL NOZZLES OPEN: 84

NOZZLE TYPE: Check valve only

LIQUID TEMP: 34° C

DURATION OF SPRAY: 15 Sec

PUMP PRESSURE: 21-28

COMP R.P.M.: 3250-2650

FLOW METER READING: 290 GPM

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 292 GPM

TOTAL AMOUNT SPRAYED: 73 Gal

NOZZLE CONFIGURATION: WING: 1-7, 14-21, 29 oz Underwing
1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
6	3300-2800	Pressure gauge out on forward pump		295

REMARKS: Nozzle numbers same as Run #2 and #3

MASS MEDIAN DIAMETER

DATE: 17 July 1963 CONVERSION FACTOR: 2.5

FLIGHT NO: 7 PAPER: Kromekote, white

SAMPLE LINE: C MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 300 GPM SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
13	1	7300			
14	2	6300			
20	3	5500			
16	5	5100*			
22	4	5000			
28	6	4800	99	1A	100(smallest)
20	7	4700			
16	9	4500			
23	8	4300			
24	10	4200			
24	11	4100			
26	12	4000			

$$MMD = \frac{67.72+0.1420(\text{Spot D Max})}{\text{Con. Factor}} = \frac{5100}{6.355 \times 2.5} = 316.7 \text{ Microns}$$

$$\text{Max. Sph. Dia.} = 67.72+0.1420(7300) = \frac{7300}{6.430} = 1104.3 \text{ Microns}$$

Min. Sph. Dia. = 63 Microns

MASS MEDIAN DIAMETER

DATE: 17 July 1963 CONVERSION FACTOR 2.5

FLIGHT #. 6 PAPER. Kromekote, white

SAMPLE LINE: C MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 295 GPM SYSTEM. C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
44	7	5300			
37	1	4900*			
38	4	4800			
43	6	4700			
37	2	4500	88	1A	100 (smaller)
35	3	4400			
41	5	4300			
39	9	4200			
37	8	4000			
36	10	3900			

$$MMD = \frac{67.72+0.1420(\text{Spot D Max})}{2.5} = \frac{4900}{6.355\times2.5} = 305.4 \text{ Microns}$$

$$\text{Max. Sph. Dia.} = 67.72+0.1420(5300) = \frac{5300}{6.430} = 820.3 \text{ Microns}$$

Min. Sph. Dia. = 63 Microns

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 570 GPM

DATE: 17 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

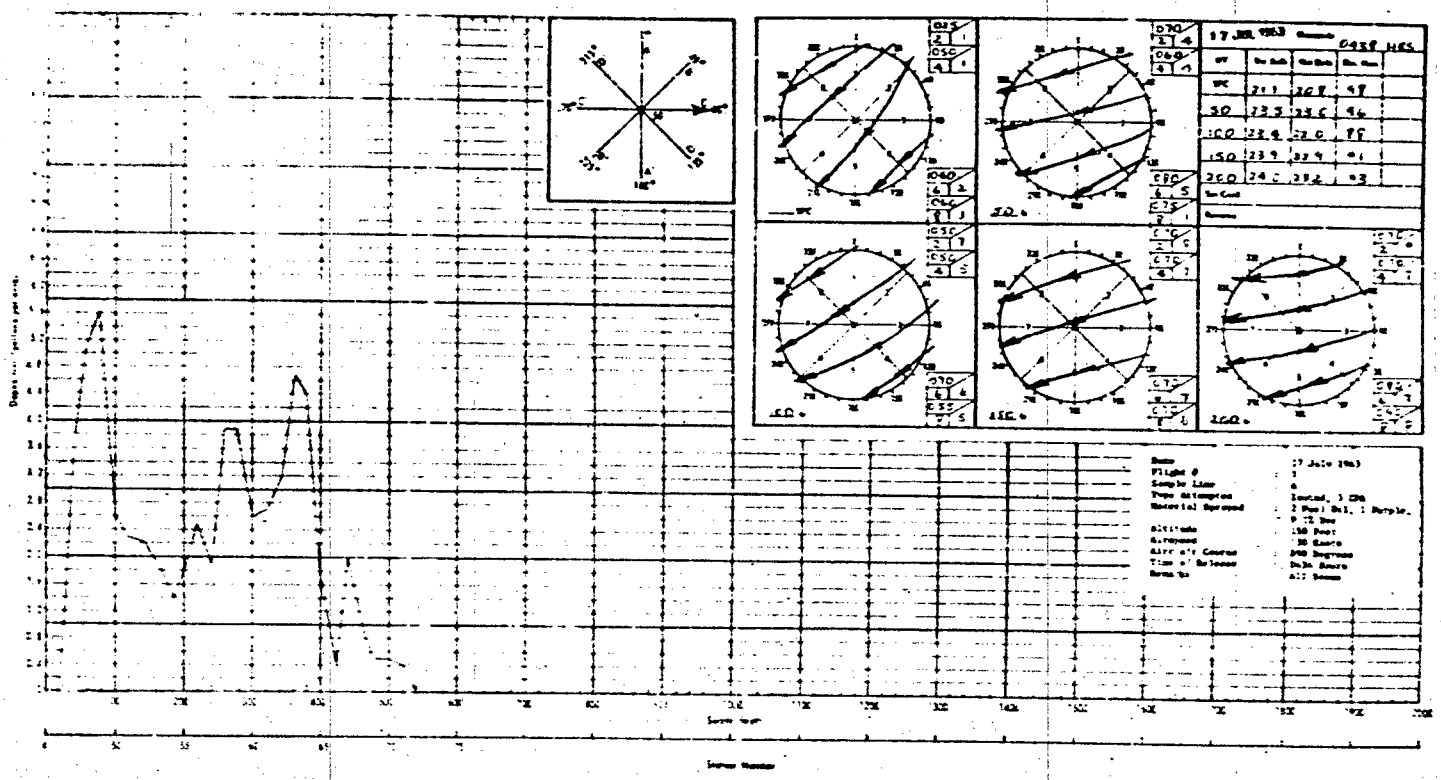
TIME OF RELEASE: 0434 Hours

AIRCRAFT COURSE: 090 Degrees

DURATION: 15 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 46 Blank				47	3.8	Stations 72 - 100 Blank	
				48	5.1		
				49	5.6		
				50	2.6		
				51	2.3		
				52	2.2		
				53	1.8		
				54	1.4		
				55	1.8		
				56	2.5		
				57	1.9		
				58	3.9		
				59	3.9		
				60	2.6		
				61	2.7		
				62	3.2		
				63	4.7		
				64	4.4		
				65	1.7		
				66	0.4		
				67	2.0		
				68	0.9		
				69	0.5		
				70	0.5		
				71	0.4		

Total 64.9



MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 17 July 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0454 Hours

DURATION: 11 Sec.

FLOW RATE: 470 GPM

SYSTEM: C-123/MC-1

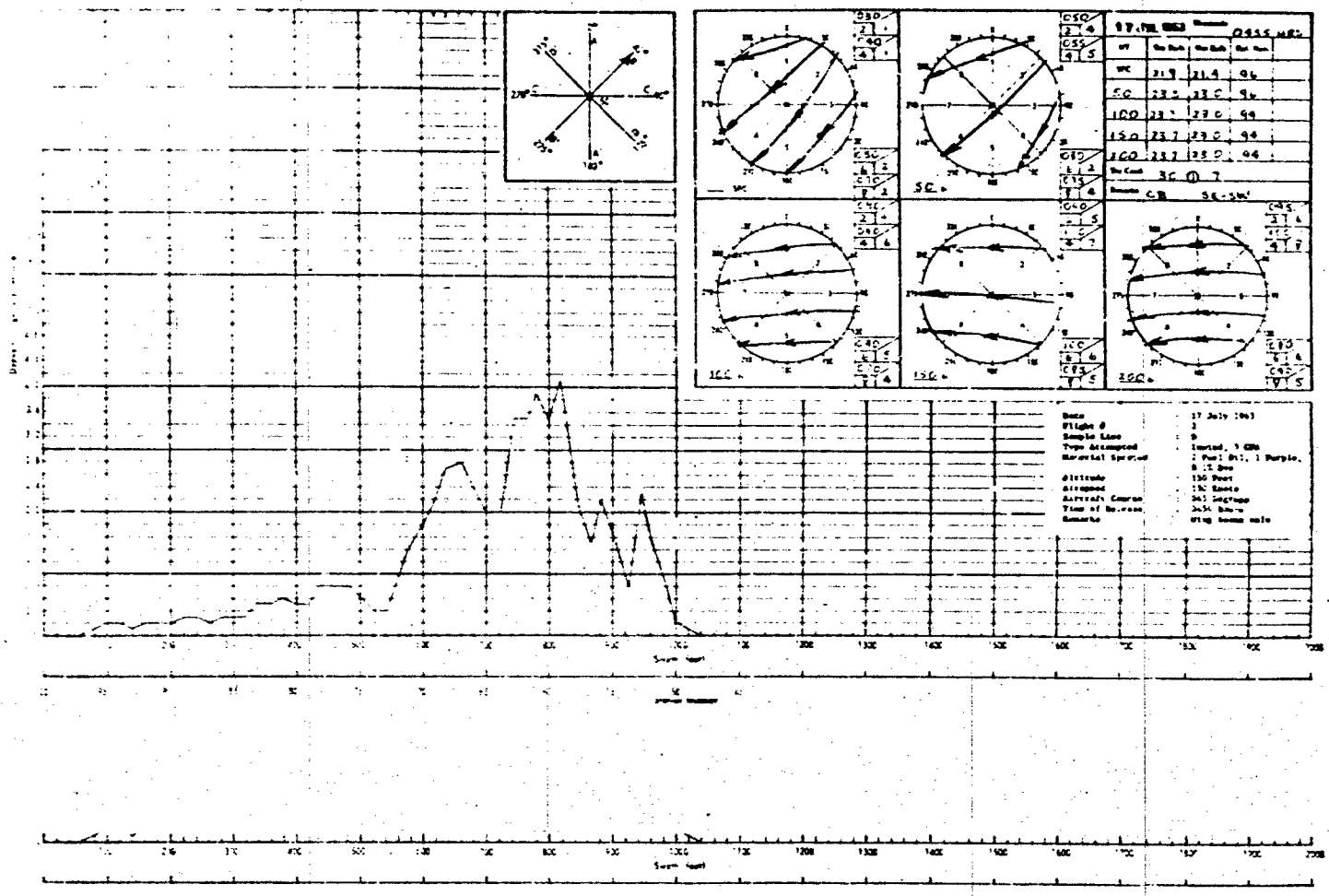
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 48 Blank				51	0.8	76	0.8
				52	1.6	77	0.8
				53	2.3	78	0.8
				54	0.8	79	0.5
				55	1.7	80	0.5
				56	2.2	81	0.6
				57	1.5	82	0.5
				58	2.1	83	0.5
				59	4.1	84	0.3
				60	3.5	85	0.3
				61	3.9	86	0.3
				62	3.5	87	0.2
				63	3.5	88	0.3
				64	2.0	89	0.3
				65	2.0	90	0.2
				66	2.4	91	0.2
				67	2.8	92	0.2
				68	2.7	93	0.1
				69	2.1	94	0.2
				70	1.8	95	0.2
				71	1.4	96	0.1
				72	0.8	97	0.0
				73	0.4	98	0.0
		49	0.1	74	0.4	99	0.0
		50	0.2	75	0.6	100	Blank

Total 58.9


Date
Flight #
Sample Line
Type Attempted
Horizontal Spread
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
17 July 1963
Seven feet

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 17 July 1963

FLIGHT #: 3

SAMPLE LINE: A

TIME OF RELEASE: 0511 Hours

DURATION: 11 Sec.

FLOW RATE: 475 GPI

SYSTEM: C-123/MC-1 C

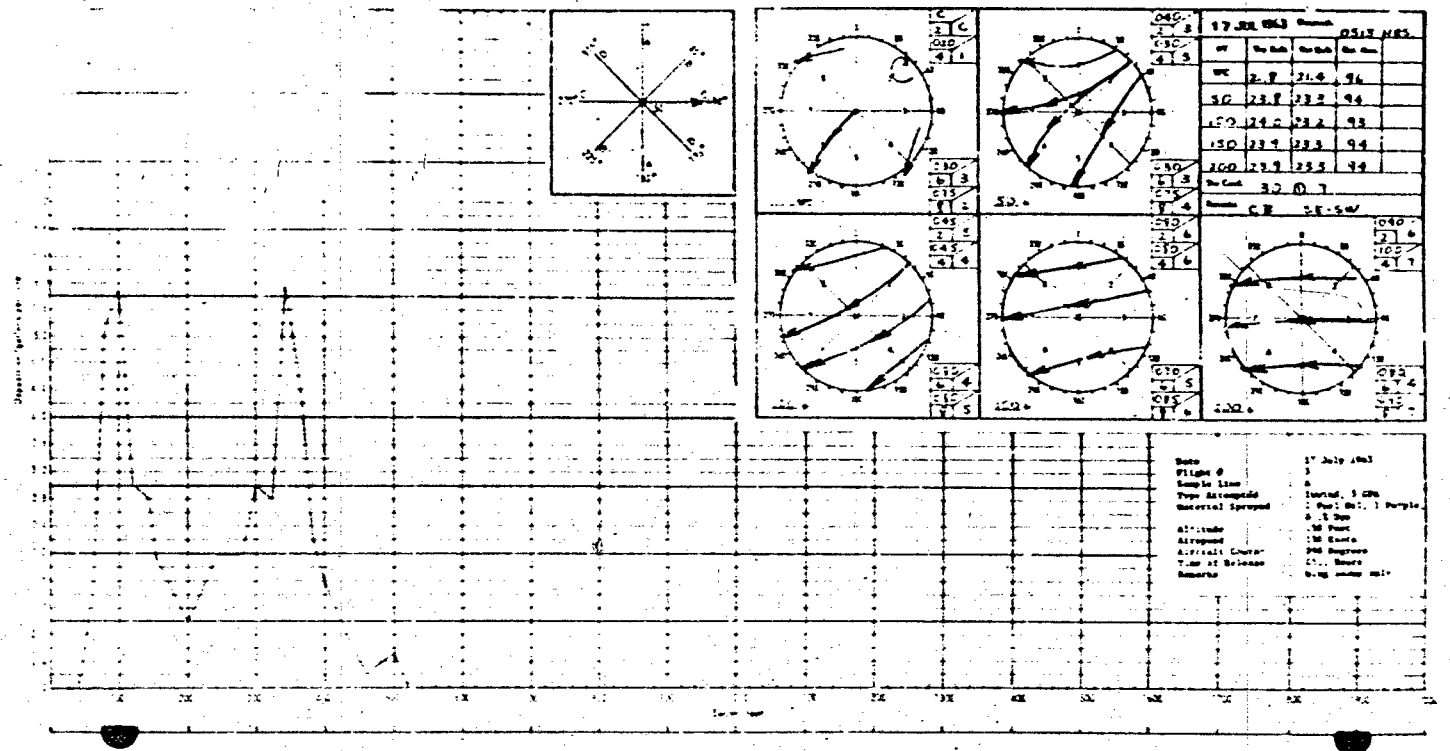
AIRSPEED: 130 Kn 1

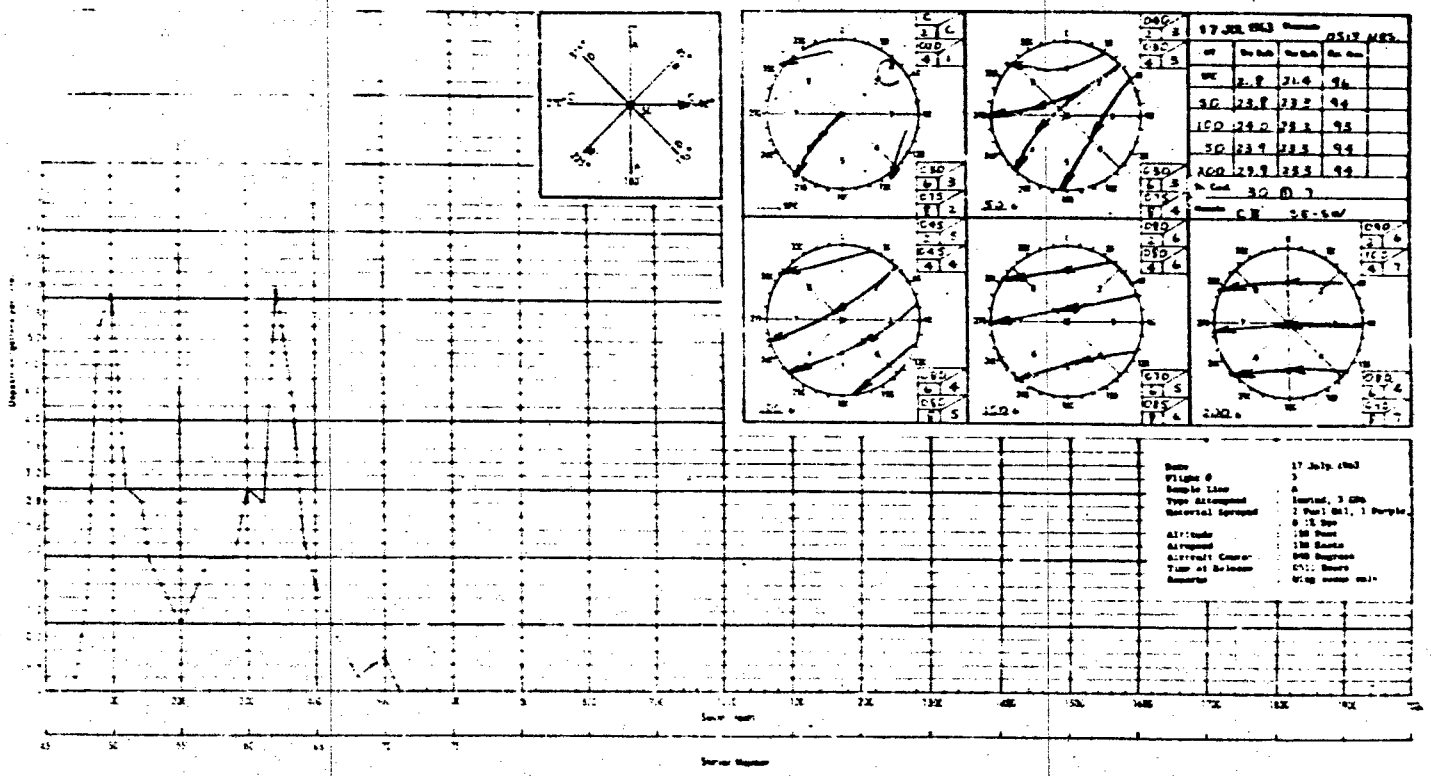
ALTITUDE: 150 Fe 15

AIRCRAFT COURSE: 090 Degre RSE:

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 47 Blank				48	1.4		
				59	5.3		
				50	5.9		
				51	3.0		
				52	2.8		
				53	1.9		
				54	1.4		
				55	1.0		
				56	1.5		
				57	2.0		
				58	2.0		
				59	2.0		
				60	3.0		
				61	2.8		
				62	6.2		
				63	4.3		
				64	2.3		
				65	1.6		
				66	1.1		
				67	0.6		
				68	0.2		
				69	0.4		
				70	0.5		
				Stations 71 - 100 Blank			30 Bl.

Total 53.2





MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 460 GPM

DATE: 17 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

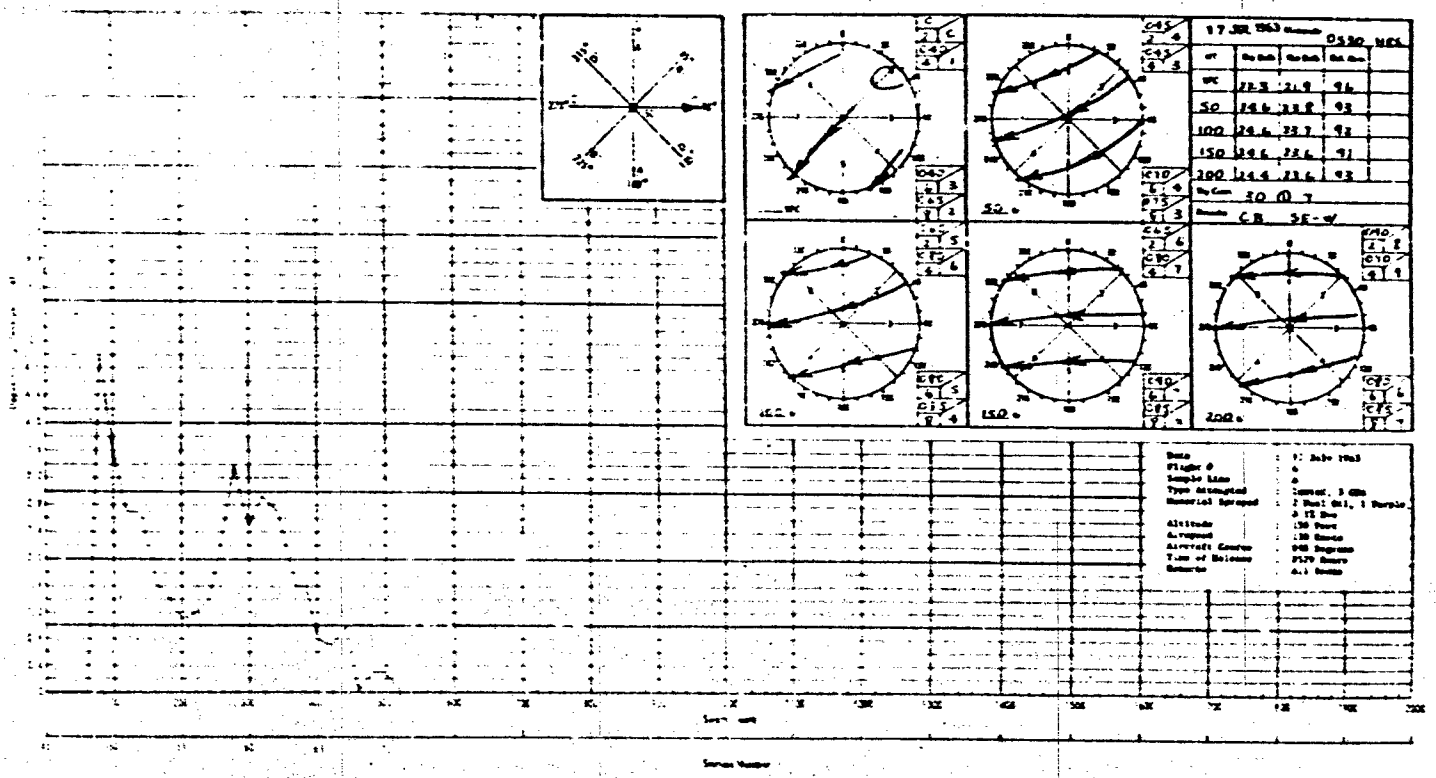
TIME OF RELEASE: 0529 Hours

AIRCRAFT COURSE: 090 Degrees

DURATION: 13 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 47 Blank				48	0.0		
				49	5.0		
				50	3.6		
				51	2.7		
				52	2.7		
				53	1.6		
				54	1.4		
				55	1.1		
				56	1.2		
				57	1.4		
				58	2.6		
				59	3.4		
				60	2.5		
				61	2.9		
				62	2.7		
				63	1.6		
				64	1.6		
				65	0.8		
				66	0.7		
				67	1.0		
				68	0.0		
				69	0.3		
				70	0.3		
				Stations 71 - 100 Blank			

Total 41.1


17 JUL 1963
0530 MDT
SE-W
Date
Flight #
Sample time
Type Aerosol
Altitude
Aerosol
Aircraft Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

DATE: 17 July 1963

FLIGHT #: 5

SAMPLE LINE: A

TIME OF RELEASE: 0546 Hours

DURATION: 12 Sec.

FLOW RATE: 105 GPM

SYSTEM: C-123/MC-1

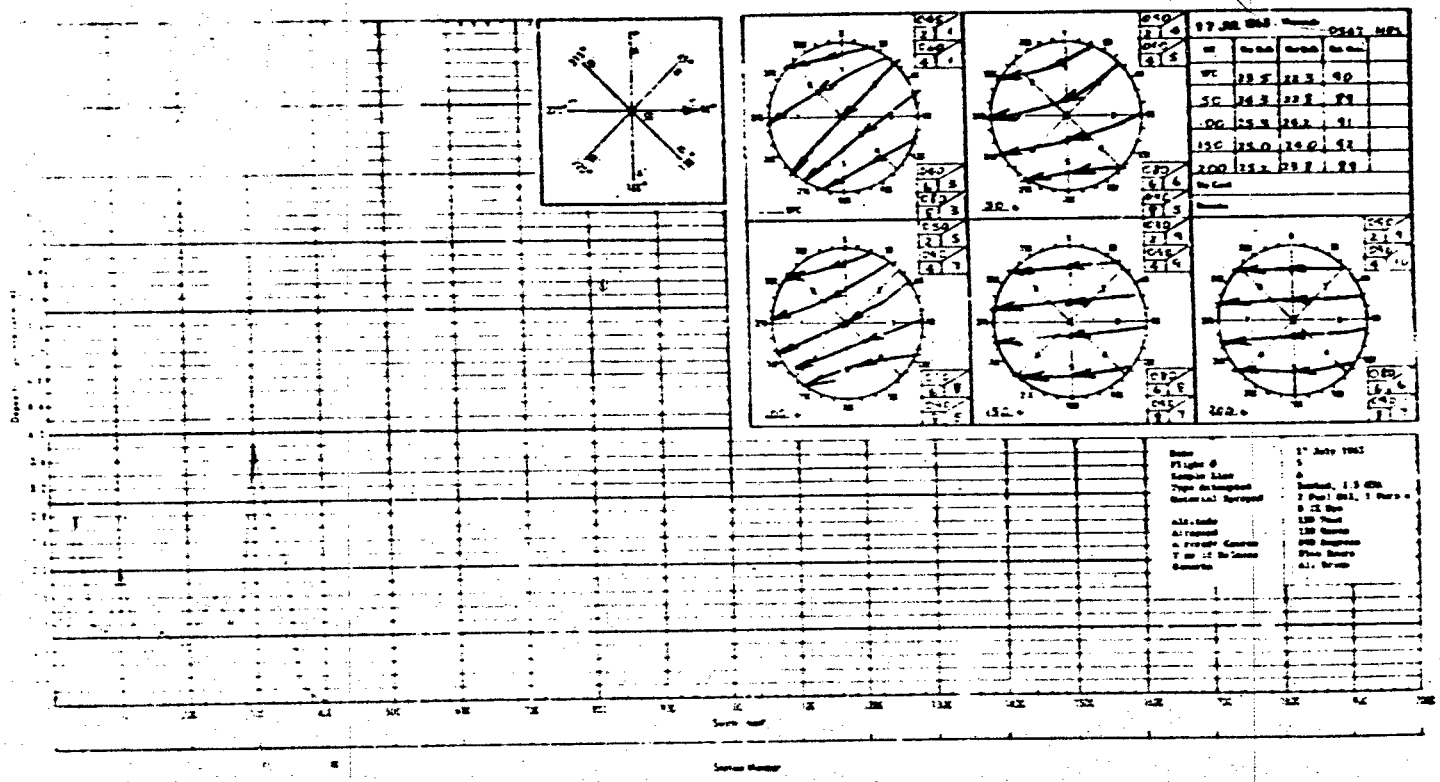
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 090 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 40 Blank				41	0.2		
				42	0.3		
				43	2.1		
				44	2.9		
				45	3.8		
				46	1.4		
				47	1.2		
				48	1.6		
				49	1.3		
				50	0.9		
				51	0.9		
				52	1.1		
				53	0.7		
				54	1.2		
				55	2.0		
				56	1.1		
				57	1.2		
				58	2.8		
				59	0.9		
				60	0.0		
				Stations 61	100 Blank		

Total 27.6



MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 295 GPM

DATE: 17 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 6

AIRSPEED: 130 Knots

SAMPLE LINE: C

ALTITUDE: 150 Feet

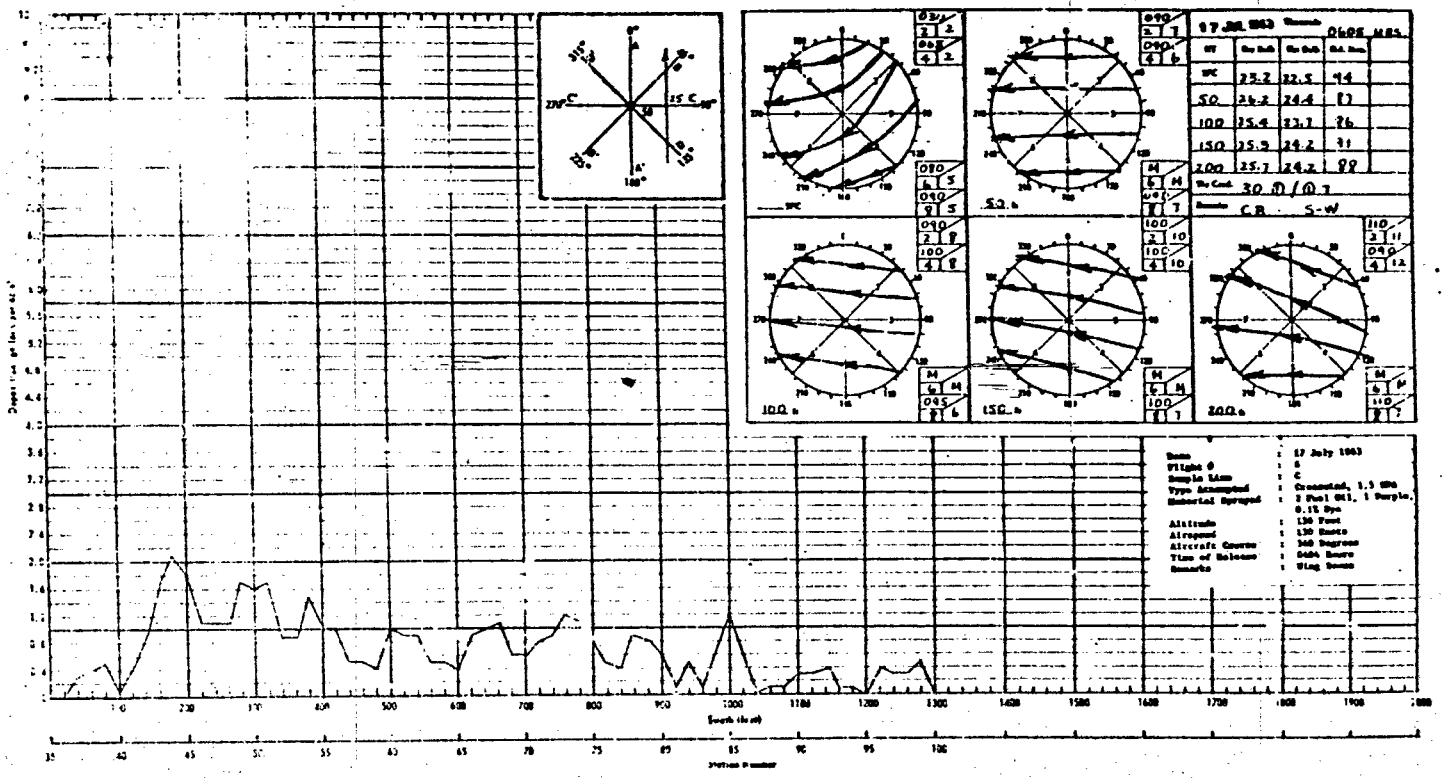
TIME OF RELEASE: 0604 Hours

AIRCRAFT COURSE: 360 Degrees

DURATION: 08 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 36 Blank				51	1.7	76	0.5
				52	0.9	77	0.4
				53	0.9	78	0.9
				54	1.5	79	0.8
				55	1.0	80	0.6
				56	1.0	81	0.1
				57	0.5	82	0.5
				58	0.5	83	0.1
				59	0.4	84	0.6
				60	1.0	85	1.2
				61	0.9	86	0.6
		37	0.3	62	0.9	87	0.0
		38	0.4	63	0.5	88	0.1
		39	0.5	64	0.5	89	0.1
		40	0.1	65	0.4	90	0.3
		41	0.5	66	0.9	91	0.3
		42	1.0	67	1.0	92	0.4
		43	1.7	68	1.1	93	0.1
		44	2.1	69	0.6	94	0.1
		45	1.8	70	0.6	95	0.0
		46	1.1	71	0.8	96	0.4
		47	1.1	72	0.9	97	0.3
		48	1.1	73	1.2	98	0.3
		49	1.7	74	1.1	99	0.5
		50	1.6	75	0.8	100	0.0

Total 45.8


17 JUL 1963
0608 HRS.
SFC
50
100
150
200
30 M/S
CB S-W
50 ft
100 ft
150 ft
200 ft
Date : 17 July 1963
Flight # : 5
Sample Size : C
Type Attempted : Crosscutset, 1.5 GHz
Material Sprayed : 2 Fuel Oil, 1 Dowtie, 0.15 Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 360 Degrees
Time of Release : 0606 Hours
Remarks : Sing Sonde

MASS DEPOSIT

MATERIAL: 2 Fuel Oil, 1 Purple

FLOW RATE: 300 GPM

DATE: 17 July 1963

SYSTEM: C-123/MC-1

FLIGHT #. 7

AIRSPEED: 130 Knots

SAMPLE LINE: C

ALTITUDE: 150 Feet

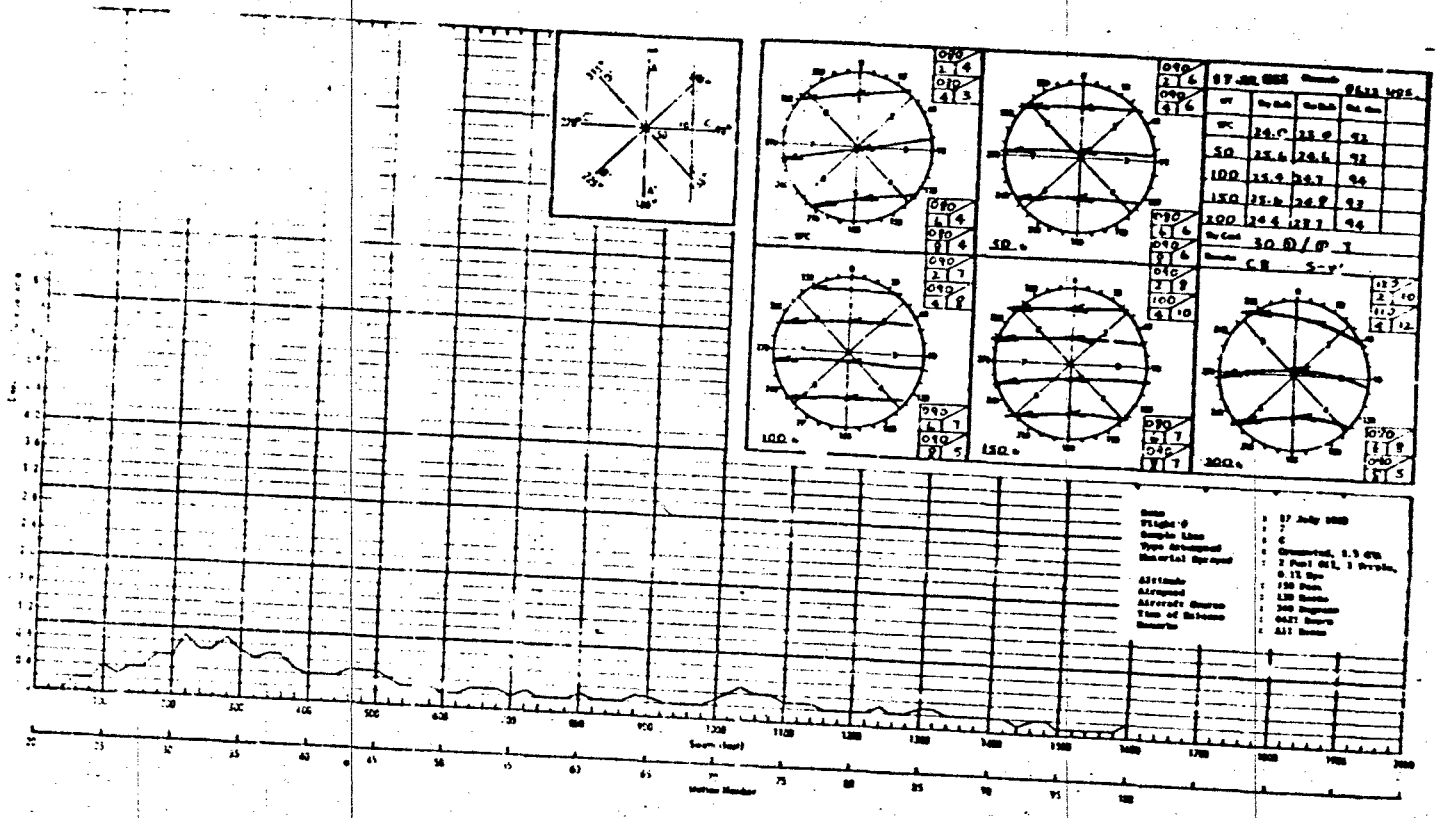
TIME OF RELEASE: 0621 Hours

AIRCRAFT COURSE: 360 Degrees

DURATION: 06 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 22 Blank		26	0.3	51	0.2	76	0.3
		27	0.4	52	0.3	77	0.3
		28	0.4	53	0.3	78	0.2
		29	0.6	54	0.3	79	0.2
		30	0.6	55	0.2	80	0.2
		31	0.9	56	0.3	81	0.2
		32	0.7	57	0.2	82	0.3
		33	0.7	58	0.2	83	0.2
		34	0.9	59	0.2	84	0.2
		35	0.7	60	0.3	85	0.3
		36	0.6	61	0.2	86	0.3
		37	0.7	62	0.2	87	0.2
		38	0.7	63	0.2	88	0.2
		39	0.5	64	0.3	89	0.2
		40	0.4	65	0.3	90	0.2
		41	0.4	66	0.2	91	0.2
		42	0.4	67	0.2	92	0.1
		43	0.5	68	0.2	93	0.2
		44	0.5	69	0.2	94	0.2
		45	0.5	70	0.3	95	0.1
		46	0.4	71	0.4	96	0.1
		47	0.3	72	0.5	97	0.1
23	0.2	48	0.3	73	0.4	98	0.1
24	0.2	49	0.3	74	0.4	99	0.1
25	0.4	50	0.2	75	0.3	100	0.2

Total 25.4



C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 18 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 110

NOZZLE TYPE: Check valve only

LIQUID TEMP: 35° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-44

PUMP R.P.M.: 3200-2600

FLOW METER READING: 475 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 480 GPM

TOTAL AMOUNT SPRAYED: 120 Gal.

NOZZLE CONFIGURATION:
WING: 1-7, 13-42 Underside
1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3200	90	40	400
4	3200	90	44	460
[illegible]	3200	90	44	460

NOTES: All booms, [illegible]
All [illegible] openings on underside of boom have ½" check valve #6140.
All even numbered openings on underside of boom have ½" check valve #6135.
All openings on aft side have ½" check valve #6140.
All openings on tail boom are on aft side. Opening number 1-4 & 10-11 are ½" check valve #6135. Openings numbered 5-15 are ½" check valve #6140.
Tail check valves flow are perpendicular to air stream.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

LIQUID SPRAYED: Purple

NOZZLE TYPE: Check valve only

DURATION OF SPRAY: 15 Sec.

PUMP R P M: 3200-2550

TOTAL AMOUNT SPRAYED: 110.5 Gal.

NUMBER OF PUMPS: 2

DATE TEST FLOWN: 18 July 19[illegible]

TOTAL NOZZLES OPEN: 98

LIQUID TEMP: 34.5° C

PUMP PRESSURE: 90-45

FLOW METER READING: 4[illegible] GPM

FLOW RATE CALIBRATED: [illegible] GPM

NOZZLE CONFIGURATION: WING: 1-7, 13-42 Underside
1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
2	3200	90	40	430
3	3200	90	39	4[illegible]

REMARKS: [illegible] only, 1 GPM.
All odd numbered openings on underside of boom have ¼" check valve #0140
All even numbered openings on underside of boom have ¼" check valve #0140
All openings on aft side have ¼" check valve #0140

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 18 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 110

NOZZLE TYPE: Check valve only

LIQUID TEMP: 36 °C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-28

PUMP R.P.M.: 3200-2400

FLOW METER READING: 285 GPM

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 278.0 GPM

TOTAL AMOUNT SPRAYED: 69.5 Gal

NOZZLE CONFIGURATION: WING: 1-7, 13-42 Underside; 1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	3200	90		280
7	3200	90	34	280

REMARKS: Nozzle arrangement same as Runs #1, #4, & #8.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

LIQUID SPRAYED: Purple

NOZZLE TYPE: Check valves only

DURATION OF SPRAY: 15 Sec.

PUMP R.P.M.: 3200-2500

NO. OF PUMPS: 1

TOTAL AMOUNT SPRAYED: 70 Gal.

DATE TEST FLOWN: 16 July [illegible]

TOTAL NOZZLES OPEN: [illegible]

LIQUID TEMP: 36° C

PUMP PRESSURE: 90-32

FLOW METER READING: [illegible]

FLOW RATE CALIBRATED: [illegible]

NOZZLE CONFIGURATION: WING: 1-7, 13-42 Underside
1-4, 19-22, 37-40 Alt side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
6	3200	90		760

REMARKS: Nozzle arrangement same as Runs #2 and #3.

MASS MEDIAN DIAMETER

DATE: 18 July 1963 CONVERSION FACTOR: 2.5

FLIGHT #: 7 PAPER: Kromekote, white

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 280 GPM SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
10	4	7800			
10	3	7500			
2	2	6800*			
12	6	6700			
10	9	6600	100	1A	100(smallest)
2	1	6400			
12	5	6300			
12	7	6200			
12	8	6100			
3	10	5900			
3	11	5800			

$$MMD = \frac{70.44+0.1431(\text{Spot D Max})}{\text{Con. Factor}} = \frac{70.44+0.1431(6800)}{2.5} = 417.4 \text{ Microns}$$

Max. Sph. Dia. = 70.44+0.1431(Max Spot) = 70.44+0.1431(7800) = 1186.6 Microns

Min. Sph. Dia. = 63 Microns

MASS MEDIAN DIAMETER

DATE: 18 July 1963 CONVERSION FACTOR [illegible]

FLIGHT #: 8 PAPER: [illegible]

SAMPLE LINE: C MATERIAL: [illegible]

FLOW RATE: 460 GPM SYSTEM C-123/MC-[illegible]

STA.	DROP #	SIZE	STA.	DROP #	SIZE
6	1	8900			
7	3	7000*			
14	4	6900			
7	2	6700			
7	7	6500	100	1A	[illegible]
16	10	6400			
7	6	6200			
7	5	6100			
7	9	6000			
7	8	5800			

$$MMD = \frac{70.44+0.1431(\text{Spot D Max})}{\text{Con. Factor}} = \frac{70.44+0.1431(7000)}{2.5} = 4[illegible] \text{ M[illegible]}$$

Max. Sph. Dia. = 70.44+0.1431(Max Spot) = 70.44+0.1431(8900) = [illegible] Microns

Min. Sph. Dia. = 63 Microns

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 400 CPM

DATE: 18 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots

SAMPLE LINE: D

ALTITUDE: 150 Feet

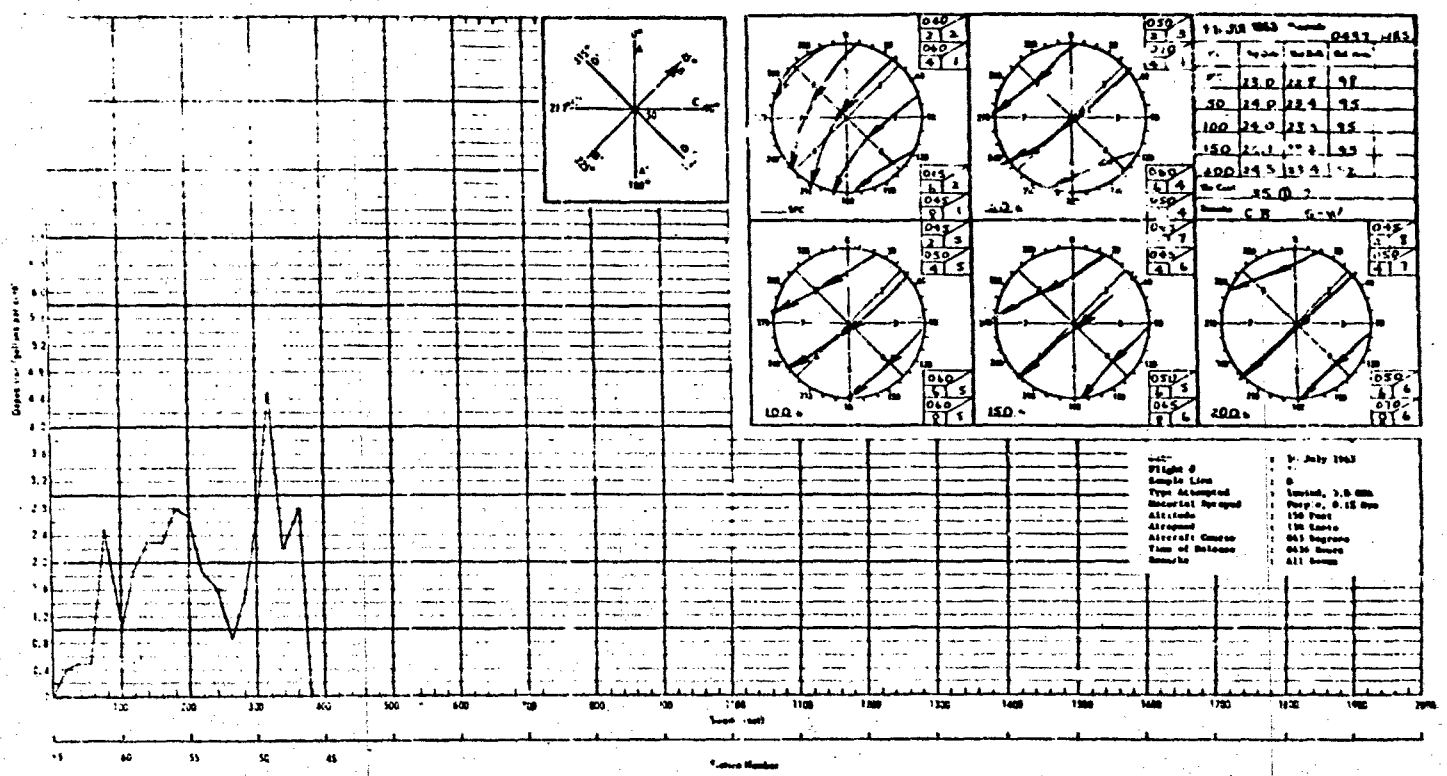
TIME OF RELEASE: 0436 Hours

AIRCRAFT COURSE: 045 Degrees

DURATION: 06 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 46 Blank				47	2.8		
				48	2.2		
				49	4.5		
				50	2.6		
				51	1.5		
				52	0.9		
				53	1.6		
				54	1.9		
				55	2.7		
				56	2.8		
				57	2.3		
				58	2.3		
				59	1.9		
				60	1.1		
				61	2.5		
				62	0.5		
				63	0.5		
				64	0.4		
				Stations 65 - 100 Blank			

Total 35.0


Flight 0
Sample Line
Type Attempted
Material Dropped
Altitude
Aircraft Course
Time of Release
Remarks
100
150
200

MASS DEPOSIT

MATERIAL: Purple

DATE: 18 July 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0454 Hours

DURATION: 13 Sec.

FLOW RATE: 430 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knot

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 49 Blank				50	0.1	75	0.5
				51	0.3	76	0.5
				52	0.6	77	0.6
				53	1.5	78	0.7
				54	2.4	79	0.3
				55	1.7	80	0.5
				56	1.1	81	0.3
				57	1.5	82	0.3
				58	1.7	83	0.3
				59	1.9	84	0.3
				60	2.1	85	0.3
				61	1.5	86	0.3
				62	1.5	87	0.3
				63	1.9	88	0.3
				64	2.2	89	0.3
				65	1.7	90	0.0
				66	0.6	Stations 91 - 100	
				66	2.2	Blank	
				68	1.9		
				69	0.9		
				70	0.8		
				71	0.7		
				72	0.8		
				73	0.7		
				74	0.5		

Total 38.5

MASS DEPOSIT

MATERIAL: Purple

DATE: 18 July 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0454 Hours

DURATION: 13 Sec.

FLOW RATE: 430 GPM

SYSTEM: C-123/MC-1

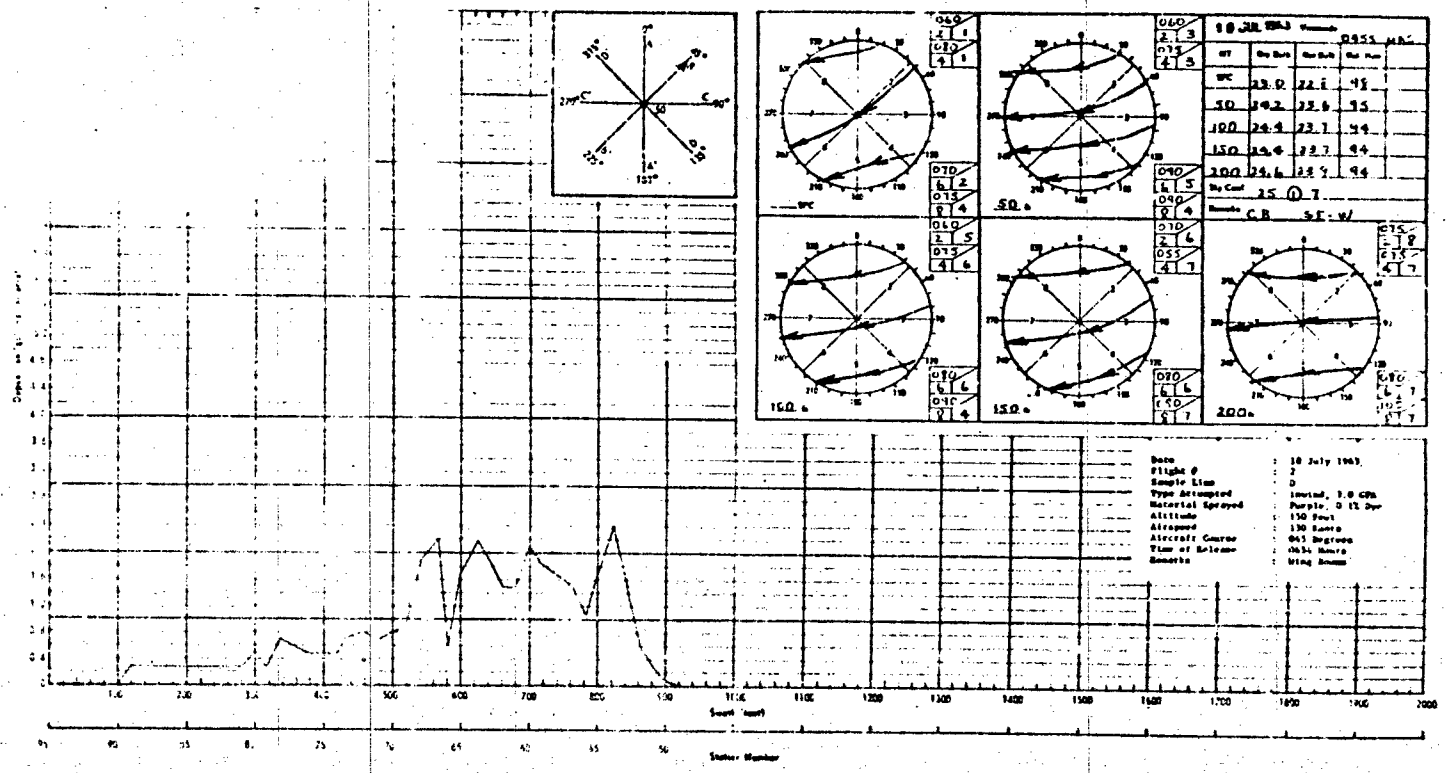
AIRSPEED: 130 Knot

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 49 Blank				50	0.1	75	0.5
				51	0.3	76	0.5
				52	0.6	77	0.6
				53	1.5	78	0.7
				54	2.4	79	0.3
				55	1.7	80	0.5
				56	1.1	81	0.3
				57	1.5	82	0.3
				58	1.7	83	0.3
				59	1.9	84	0.3
				60	2.1	85	0.3
				61	1.5	86	0.3
				62	1.5	87	0.3
				63	1.9	88	0.3
				64	2.2	89	0.3
				65	1.7	90	0.0
				66	0.6	Stations 91 - 100	
				66	2.2	Blank	
				68	1.9		
				69	0.9		
				70	0.8		
				71	0.7		
				72	0.8		
				73	0.7		
				74	0.5		

Total 38.5


Date : 10 July 1963
Flight # : 2
Sample Line : D
Type Attempted : Inverted, 3.0 GPA
Material Sprayed : Purple, 0.12 Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 045 Degrees
Time of Release : 0834 Hours
Remarks : Wing Booms
Sample Number

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 425 GPM

DATE: 18 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 3

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

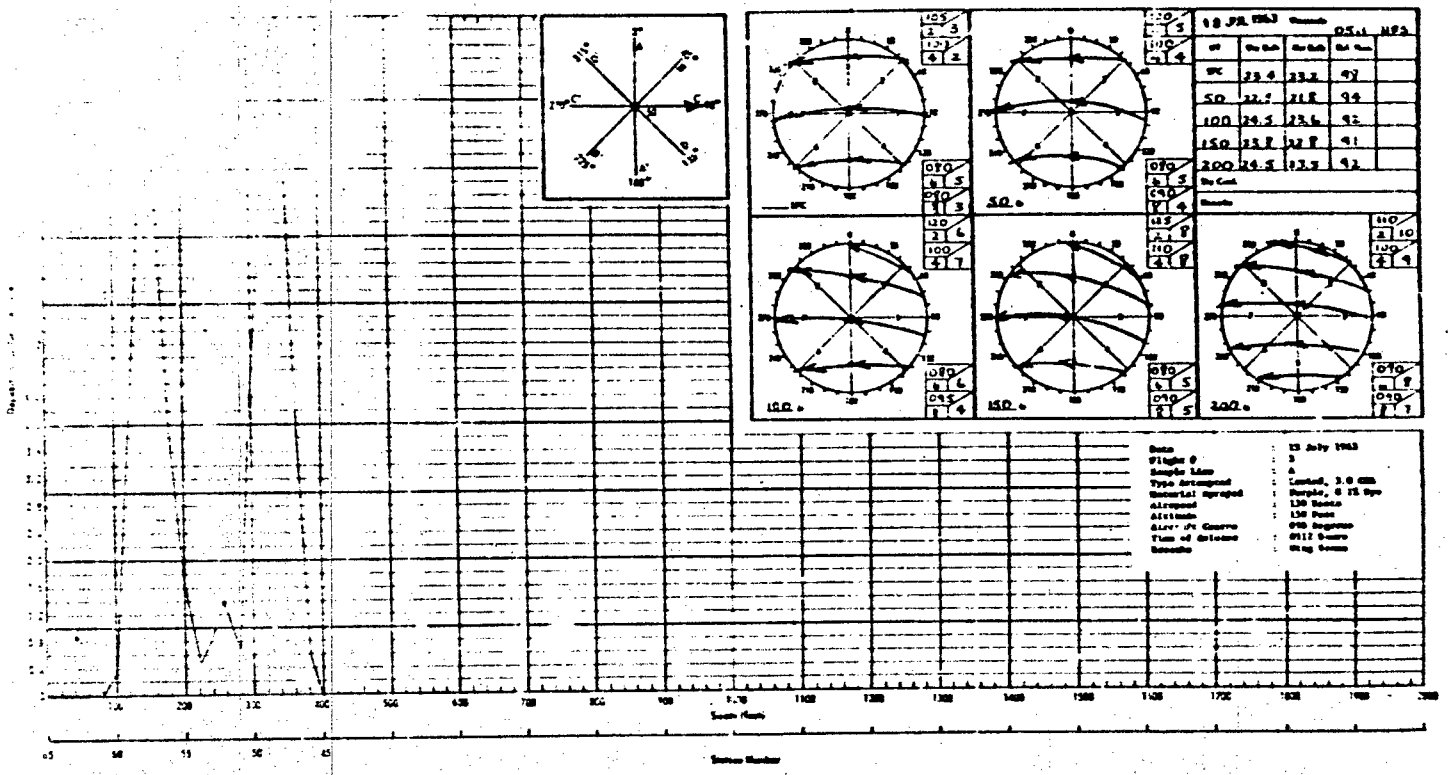
TIME OF RELEASE: 0512 Hours

AIRCRAFT COURSE: 090 Degrees

DURATION: 12 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 45 Blank				46	0.6		
				47	4.1		
				48	11.0		
				49	8.4		
				50	4.7		
				51	0.7		
				52	1.4		
				53	0.8		
				54	0.5		
				55	1.6		
				56	3.8		
				57	7.7		
				58	8.9		
				59	4.3		
				60	0.3		
				Stations 61 - 100 Blank			

Total 58.7



MASS DEPOSIT

MATERIAL: Purple

DATE: 18 July 1963

FLIGHT #: 4

SAMPLE LINE: A

TIME OF RELEASE: 0529 Hours

DURATION: 11 Sec.

FLOW RATE: 460 GPM

SYSTEM: C-123/MC-1

AIRSPEED: 130 Knots

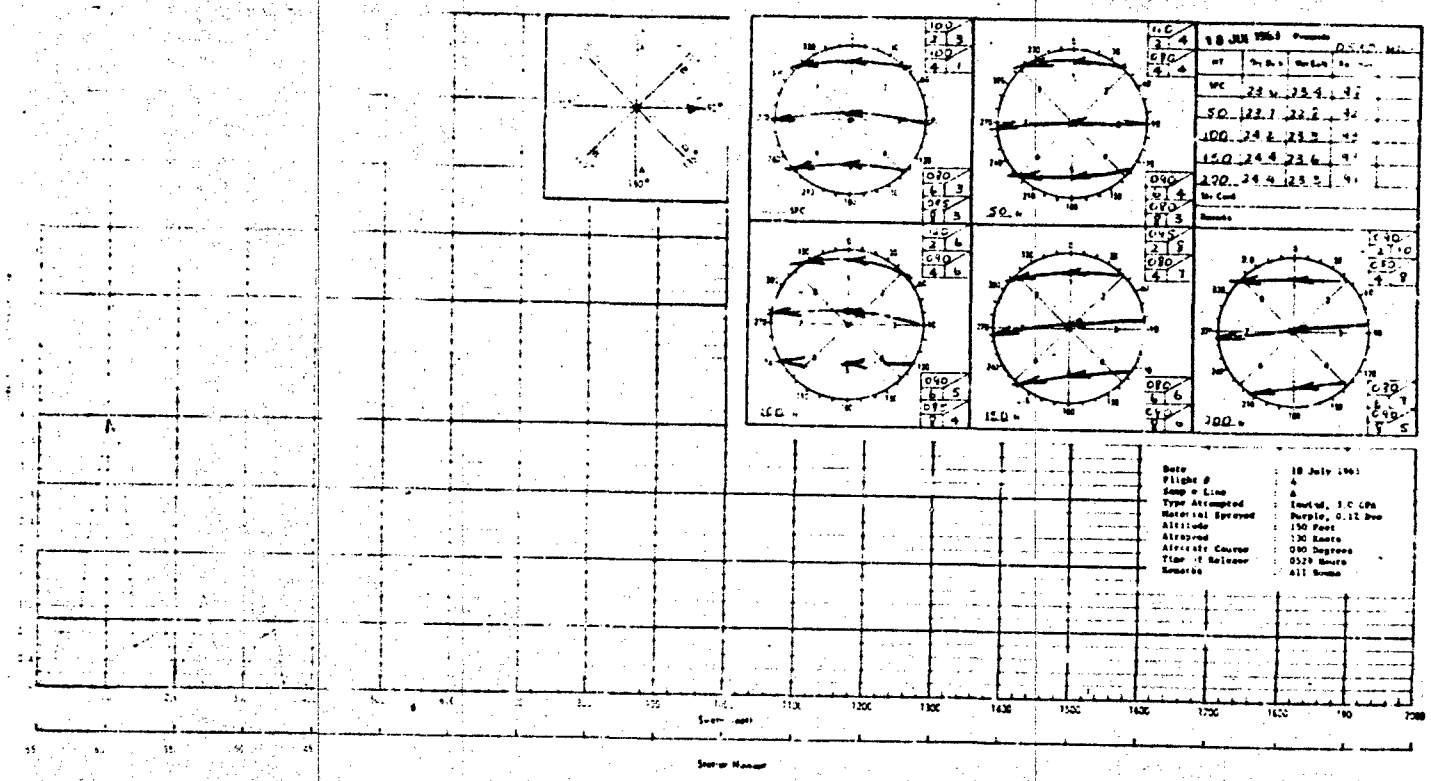
ALTITUDE: 150 Feet

AIRCRAFT COURSE: 090 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 46 Blank				47	0.0		
				48	0.9		
				49	0.7		
				50	0.2		
				51*	2.1		
				52	0.4		
				53	1.4		
				54	0.6		
				55	0.2		
				56	0.9		
				57	0.7		
				58	0.6		
				59	3.4		
				60	3.9		
				61	2.5		
				62	1.0		
				63	1.0		
				64	0.2		
				Stations 65 - 100 Blank			

*Contaminated Sample

Total 21.1


Date : 18 July 1963
Flight # : 4
Samp e Line : 4
Type Attempted : Inert, 1.0 GPA
Material Sprayed : Purple, 0.12 Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 090 Degrees
Time of Release : 0529 Hours
Remarks : All Scans
Sample Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 18 July 1963

FLIGHT #: 5

SAMPLE LINE: A

TIME OF RELEASE: 0546 Hours

DURATION: 11 Sec.

FLOW RATE: 280 GPM

SYSTEM: C-123/MC-1

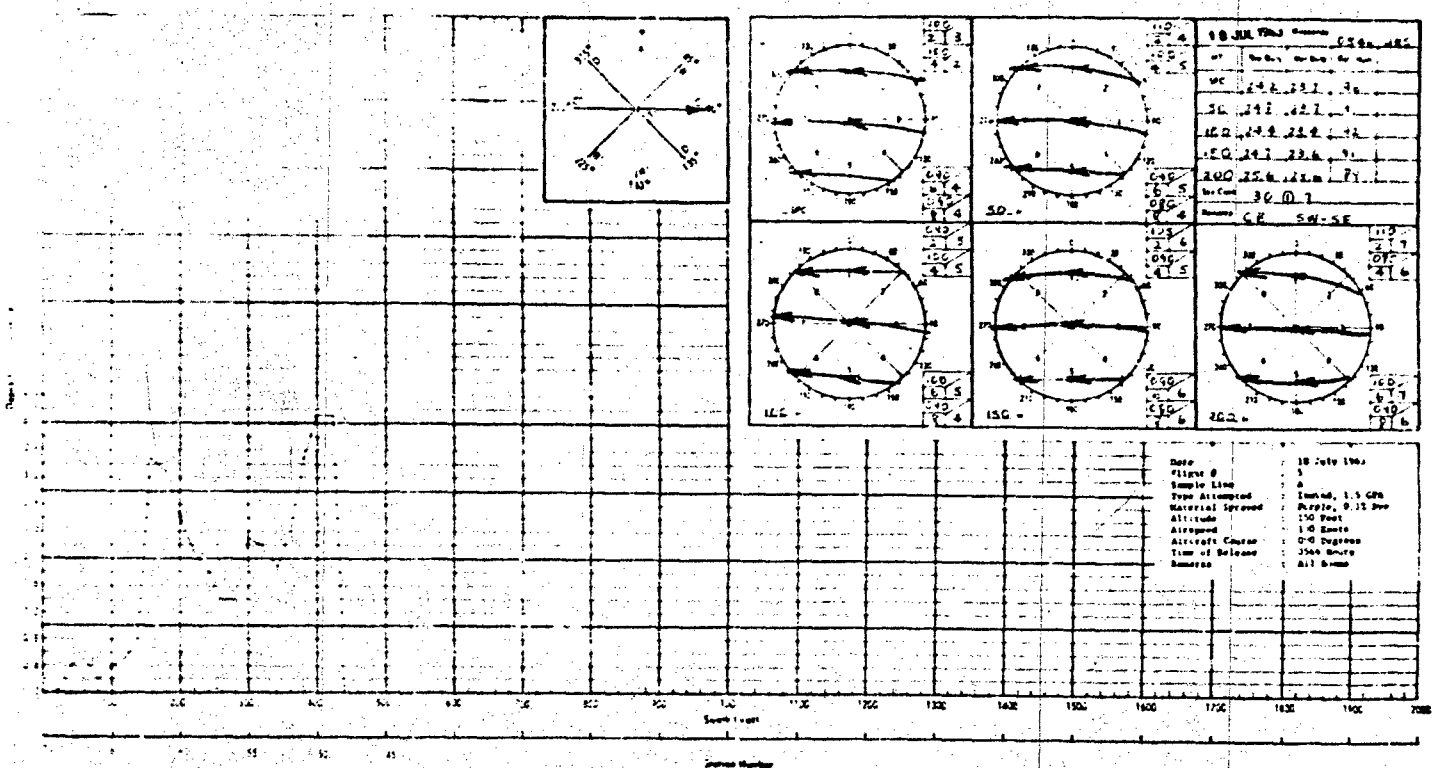
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 090 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 48 Blank				49	4.1		
				50	4.1		
				51	3.5		
				52	2.5		
				53	1.9		
				54	2.2		
				55	2.3		
				56	1.4		
				57	1.4		
				58	1.8		
				59	2.1		
				60	2.6		
				61	3.3		
				62	3.5		
				63	0.8		
				64	0.5		
				65	0.4		
				66	0.2		
				67	0.5		
				68	0.4		
				Stations 69 - 100 Blank			

Total 39.5


Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
Sample Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 18 July 1963

FLIGHT #: 6

SAMPLE LINE: A

TIME OF RELEASE: 0604 Hours

DURATION: 12 Sec.

FLOW RATE: 260 GPM

SYSTEM: C-123/MC-1

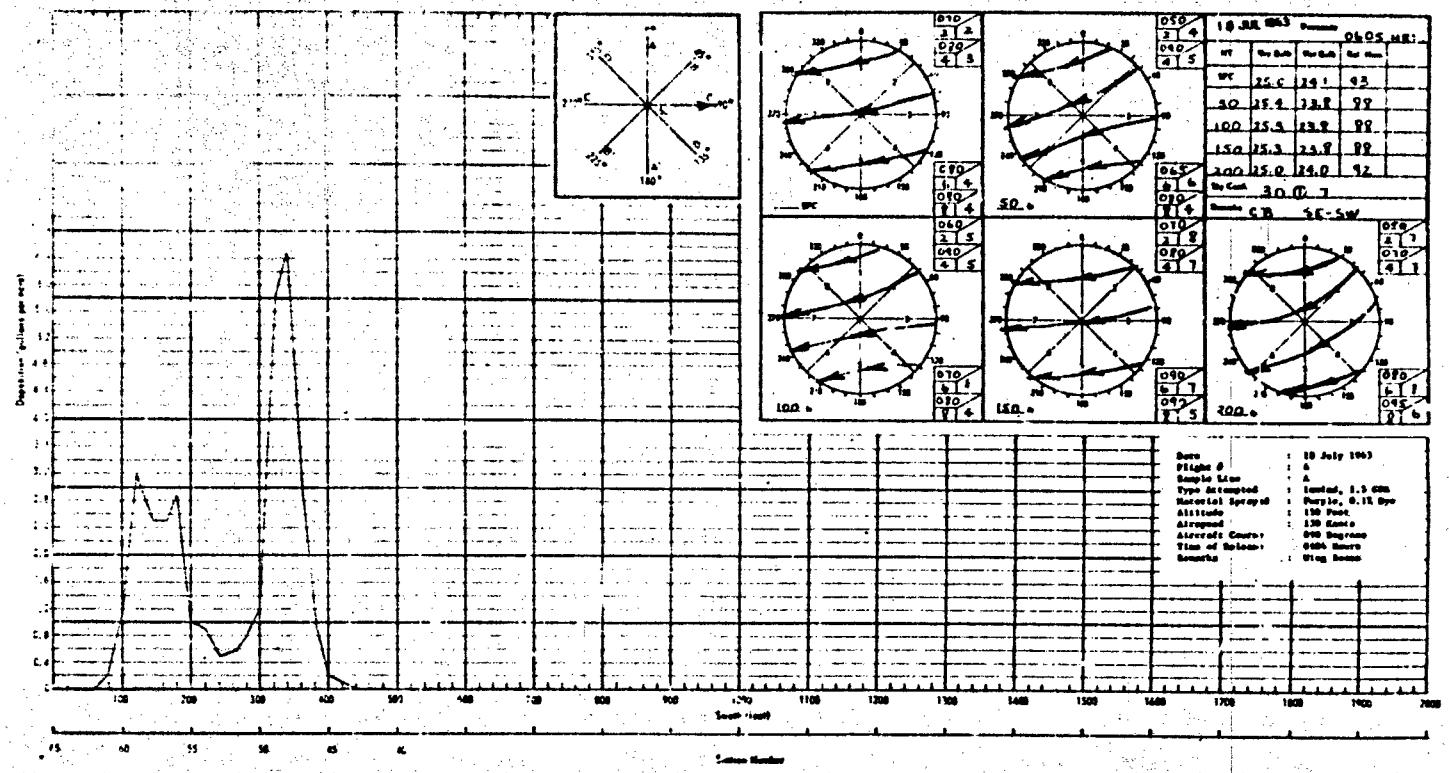
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 090 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 43 Blank				44	0.1		
				45	0.2		
				46	0.9		
				47	2.8		
				48	6.5		
				49	5.8		
				50	1.2		
				51	0.8		
				52	0.6		
				53	0.5		
				54	0.9		
				55	1.0		
				56	2.9		
				57	2.5		
				58	2.5		
				59	3.2		
				60	1.1		
				61	0.2		
				Stations 62 - 100 Blank			

Total 33.7


Deposition (gallons per acre)
South (feet)
Station Number
Date : 10 July 1963
Flight # : A
Sample Line : A
Type Attempted : Limited, 1.5 GPM
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 090 Degrees
Time of Release : 0605 Hours
Remarks : Wing Boom
10 JUL 1963
0605 HR:
SFC
50
100
150
200
30 ft
SE-SW

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 280 GPM

DATE: 18 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 7

AIRSPEED: 130 Knots

SAMPLE LINE: C

ALTITUDE: 150 Feet

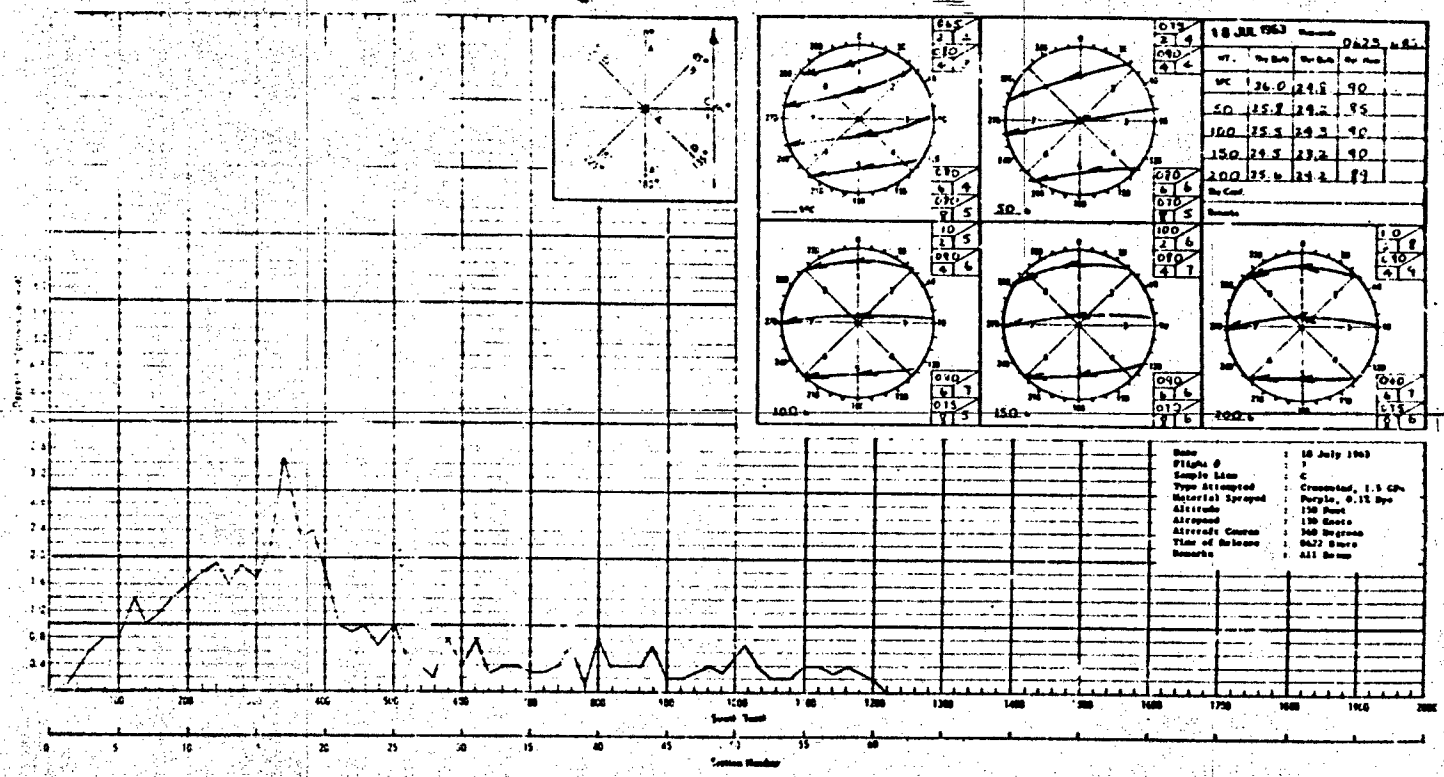
TIME OF RELEASE: 0622 Hours

AIRCRAFT COURSE: 360 Degrees

DURATION: 11 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	Blank	26	0.5	51	0.7		
2	0.3	27	0.4	52	0.4		
3	0.6	28	0.2	53	0.2		
4	0.8	29	0.8	54	0.2		
5	0.8	30	0.4	55	0.4		
6	1.4	31	0.8	56	0.4		
7	1.0	32	0.3	57	0.3		
8	1.1	33	0.4	58	0.4		
9	1.4	34	0.4	59	0.3		
10	1.6	35	0.3	60	0.2		
11	1.8	36	0.3	Stations 61 - 100 Blank			
12	1.9	37	0.4				
13	1.6	38	0.7				
14	1.9	39	0.1				
15	1.7	40	0.8				
16	2.1	41	0.4				
17	3.5	42	0.4				
18	2.3	43	0.4				
19	2.4	44	0.7				
20	1.8	45	0.2				
21	1.0	46	0.2				
22	0.9	47	0.3				
23	1.0	48	0.4				
24	0.7	49	0.3				
25	1.0	50	0.5				

Total 48.7


18 JUL 1963
0423
VC
50
100
150
200
Date : 18 July 1963
Flight # : 1
Sample Line : C
Type Attempted : Crosswind, 1.5 GPM
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 360 Degrees
Time of Release : 0423 Hours
Remarks : All Dense
Sample Number

MASS DEPOSIT

MATERIAL: Purple

DATE: 18 July 1963

FLIGHT #: 8

SAMPLE LINE: C

TIME OF RELEASE: 0639 Hour

DURATION: 11 Sec.

FLOW RATE: 460 GPM

SYSTEM: C-123/MC-1

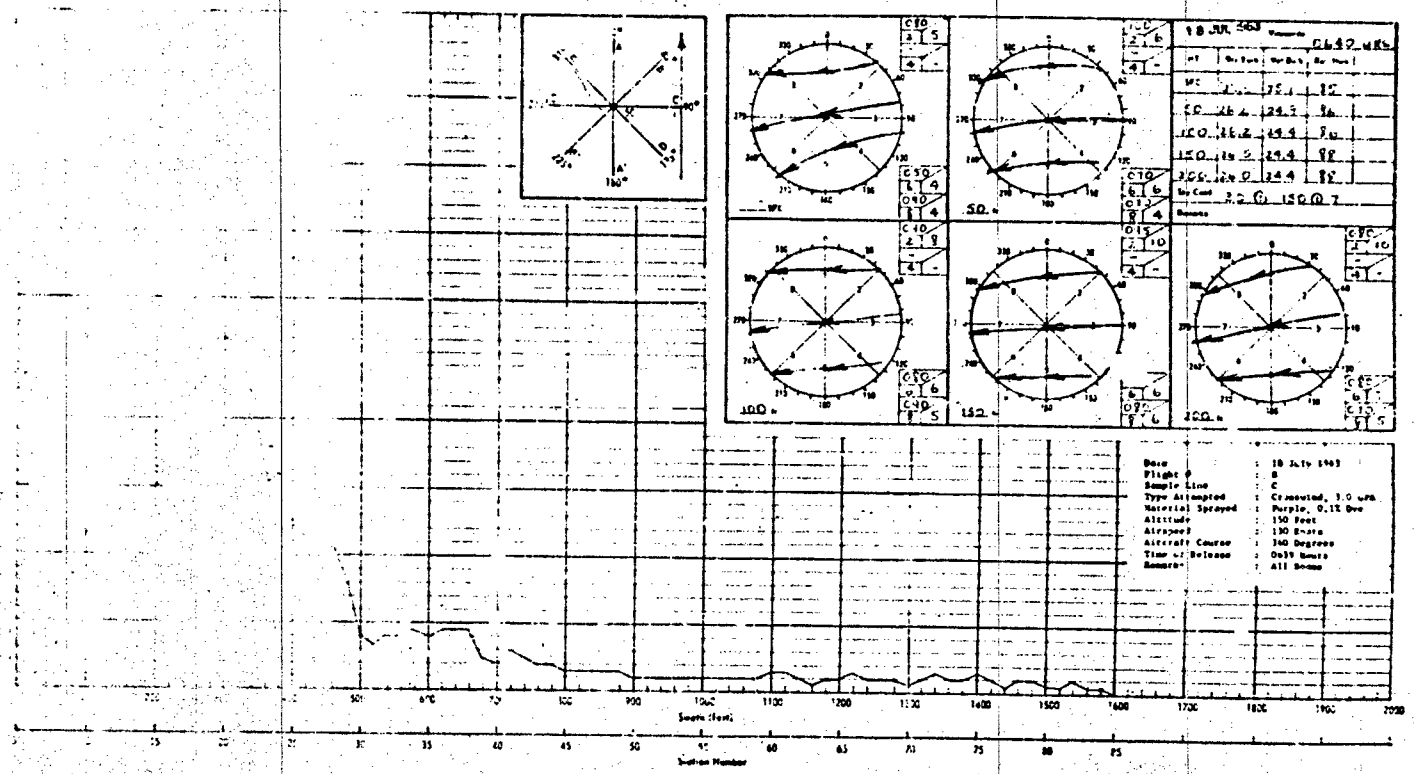
ALTITUDE: 130 Knots

AIRSPEED: 150 Feet

AIRCRAFT COURSE: 360 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 6 Blank		26	2.3	51	0.2	76	0.2
		27	2.3	52	0.2	77	0.1
		28	2.1	53	0.2	78	0.2
		29	1.6	54	0.2	69	0.2
		30	0.8	55	0.2	80	0.1
		31	0.7	56	0.2	81	0.1
7	0.5	32	0.8	57	0.2	82	0.2
8	2.0	33	0.8	58	0.2	83	0.1
9	1.7	34	0.9	59	0.2	84	0.1
10	2.3	35	0.8	60	0.3	Stations 85 - 100 Blank	
11	2.3	36	0.9	61	0.3		
12	2.4	37	0.9	62	0.2		
13	3.0	38	0.9	63	0.1		
14	2.9	39	0.5	64	0.2		
15	3.0	40	0.4	65	0.2		
16	3.4	41	0.6	66	0.3		
17	5.1	42	0.5	67	0.2		
18	4.3	43	0.4	68	0.2		
19	4.6	44	0.4	69	0.2		
20	5.2	45	0.3	70	0.1		
21	5.1	46	0.3	71	0.2		
22	4.3	47	0.3	72	0.3		
23	3.1	48	0.3	73	0.2		
24	3.2	49	0.3	74	0.2		
25	2.4	50	0.2	75	0.3		

Total 87.7


Date : 18 July 1963
Flight # : B
Sample Line : C
Type Attempted : Crosswind, 3.0 mph
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 340 Degrees
Time of Release : 0619 hours
Remarks : All Drums
Source (feet)
Station Number

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 19 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 98

NOZZLE TYPE: Check valves only

LIQUID TEMP: 34.5° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-45

PUMP R.P.M.: 3200-2550

FLOW METER READING: 435 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 442 GPM

TOTAL AMOUNT SPRAYED: 110.5 Gal.

NOZZLE CONFIGURATION: WING: 1-7, 13-42 Underside
1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3200	90		430
7	3200-2600	90	52	430

REMARKS: Wings only, 3 GPA.
All odd numbered openings on underside of boom have ½" check valve #6140.
All even numbered openings on underside of boom have ½" check valve #6135.
All openings on aft side have ½" check valve #6140.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 19 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 110

NOZZLE TYPE: Check valves only

LIQUID TEMP: 35° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-44

PUMP R.P.M.: 3200-2600

FLOW METER READING: 475 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 480 GPM

TOTAL AMOUNT SPRAYED: 120 Gal.

NOZZLE CONFIGURATION:
WING: 1-7, 13-42 Underside
1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI DURING	PSI BEFORE	GPM FLOWMETER
2	3200		90	465
3	3200		90	465
6	3200		90	455
9	3100		85	445

REMARKS: All booms, 3 GPA.
All odd numbered openings on underside of boom have ¼" check valve #6140.
All even numbered openings on underside of boom have ¼" check valve #6135.
All openings on aft side have ¼" check valve #6140.
All openings on tail boom are on aft side. Opening numbers 1-4 & 16-19 are ¼" check valve #6135. Openings numbered 5-15 are ¼" check valve #6140.
Tail check valves flow are perpendicular to air stream.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 19 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 12

NOZZLE TYPE: Check valves only

LIQUID TEMP: -----

DURATION OF SPRAY: -----

PUMP PRESSURE: -----

PUMP R.P.M.: -----

FLOW METER READING: -----

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: -----

TOTAL AMOUNT SPRAYED: -----

NOZZLE CONFIGURATION: TAIL 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

Run #	RPM	PSI Before	PSI During	GPM Flowmeter
4		98		95
5		98		95

REMARKS: Tail only.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 19 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN. 110

NOZZLE TYPE: Check valves only

LIQUID TEMP: 36° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-28

PUMP R.P.M.: 3200-2400

FLOW METER READING: 285 GPM

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 278 GPM

TOTAL AMOUNT SPRAYED: 69.5 Gal.

NOZZLE CONFIGURATION:
WING: 1-7, 13-42 Underside
WING: 1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
8	3300-2500	96	36	290

REMARKS: Nozzle arrangement same as Runs #2, #3, #6, and #9.

MASS MEDIAN DIAMETER

DATE: 19 July 19[illegible] CONVERSION FACTOR: [illegible]

FLIGHT #: [illegible] PAPER: Kromekote, wht.

SAMPLE LINE: C MATERIAL: Purple

FLOW RATE: 445 GPH SYSTEM: C-123/MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
7	1	8500			
7	2	7700			
7	4	6900*			
7	3	6700			
7	5	6600			
6	11	6500	98	1A	100 (smallest)
7	7	6400			
7	6	6300			
7	9	6200			
7	8	6100			
7	10	6000			

$$MMD = \frac{70.4440.1431(\text{Spot D Max})}{\text{Con. Factor}} = \frac{70.4440.1431(6900)}{2.5} = 423.1 \text{ Microns}$$

Max. Sph. Dia. = 70.4440.1431(Max Spot) = 70.4440.1431(6500) = [illegible] Microns

Min. Sph. Dia. = 63 Microns

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 430 GPM

DATE: 19 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 1

AIRSPEED: 130 Knots

SAMPLE LINE: D

ALTITUDE: 150 Feet

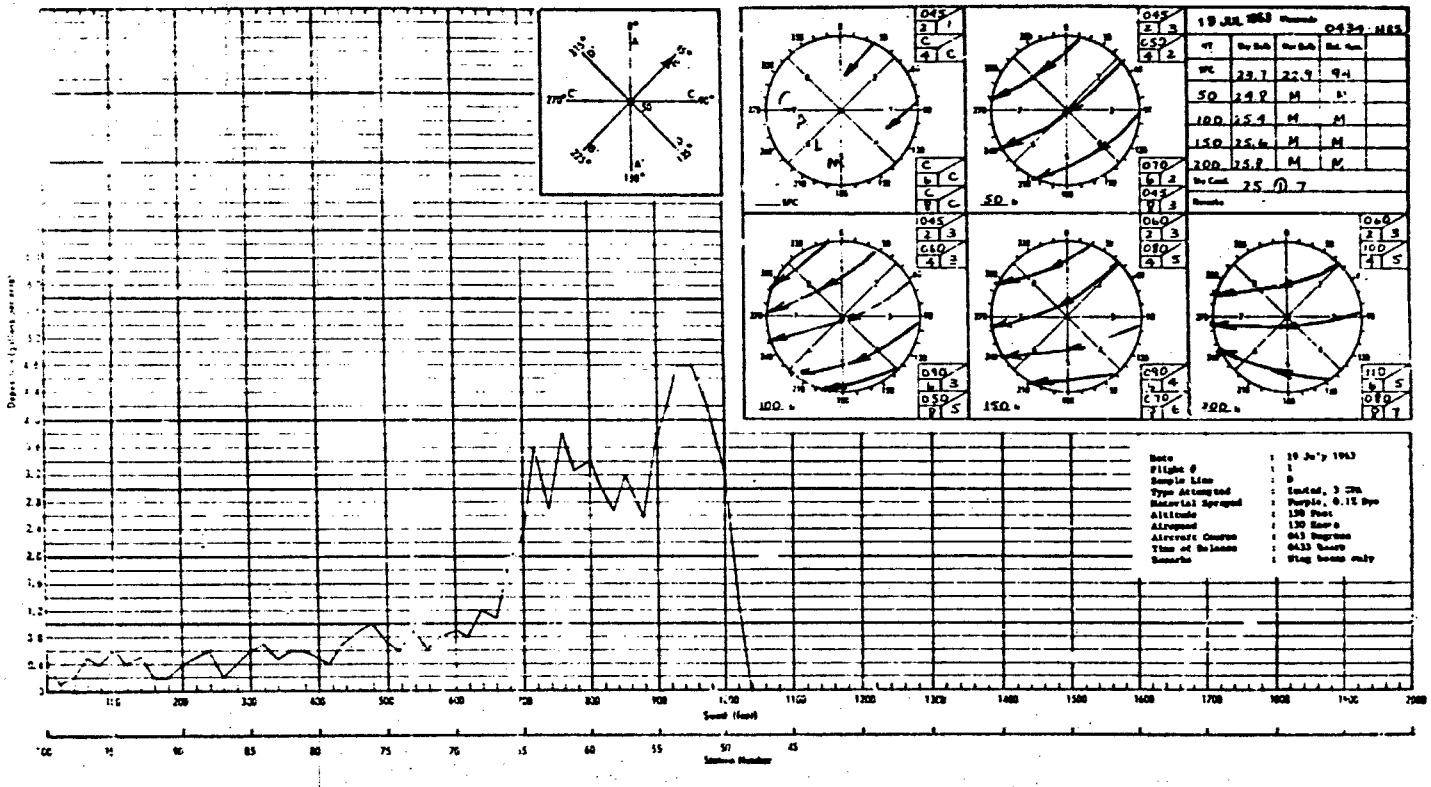
TIME OF RELEASE: 0433 Hours

AIRCRAFT COURSE: 045 Degrees

DURATION: 10 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 48 Blank				51	4.2	76	1.0
				52	4.8	77	0.9
				53	4.8	78	0.7
				54	4.2	79	0.4
				55	3.8	80	0.5
				56	2.6	81	0.6
				57	3.2	82	0.6
				58	2.7	83	0.5
				59	3.0	84	0.7
				60	3.4	85	0.6
				61	3.3	86	0.4
				62	3.8	87	0.2
				63	2.7	88	0.6
				64	3.6	89	0.5
				65	2.3	90	0.4
				66	1.9	91	0.2
				67	1.1	92	0.2
				68	1.2	93	0.5
				69	0.8	94	0.4
				70	0.9	95	0.6
				71	0.8	96	0.4
				72	0.6	97	0.5
				73	0.9	98	0.2
		49	1.4	74	0.6	99	0.1
		50	3.3	75	0.7	100	0.4

Total 78.7


Sound (feet)
Station Number
Date : 19 July 1963
Flight # : 1
Sample Line : 8
Type Attempted : Seeded, 3 CPS
Material Sprayed : Purple, 0.1% Dye
Altitude : 130 Feet
Airspeed : 130 Knots
Aircraft Course : 043 Degrees
Time of Release : 0433 Hours
Remarks : Stag beam only
19 JUL 1963
0439 MDT
SFC 23.7 22.9 94
50 24.8 M
100 25.4 M M
150 25.6 M M
200 25.8 M M
Dew Cond. 25 M 7
50 b
100 b
150 b
200 b

MASS DEPOSIT

MATERIAL: Purple

DATE: 19 July 1963

FLIGHT #: 2

SAMPLE LINE: D

TIME OF RELEASE: 0451 Hours

DURATION: 12 Sec.

FLOW RATE: 465 GPM

SYSTEM: C-123/MC-1

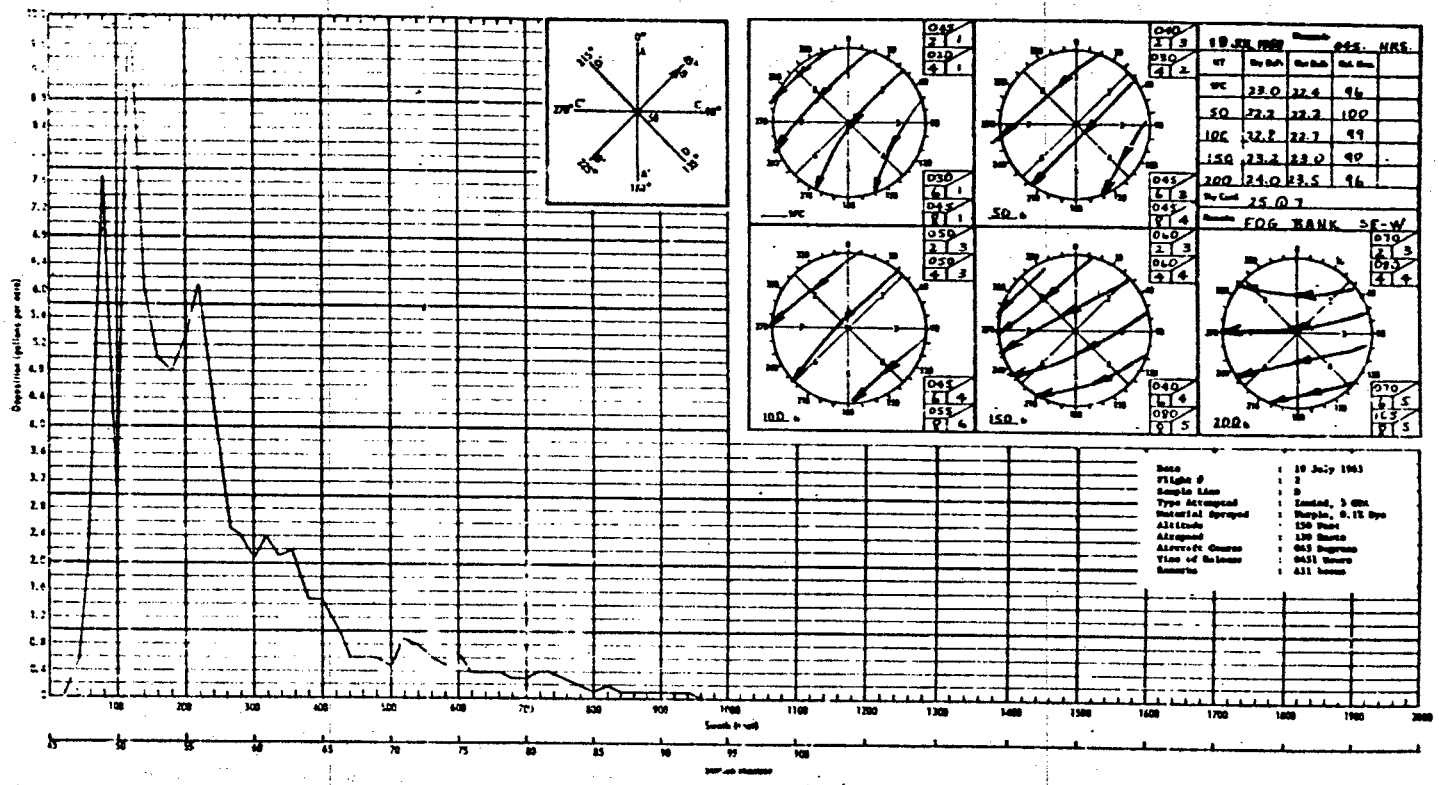
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 46 Blank				51	10.2	76	0.4
				52	6.0	77	0.4
				53	5.0	78	0.4
				54	4.8	79	0.3
				55	5.3	80	0.3
				56	6.1	81	0.4
				57	4.1	82	0.4
				58	2.5	83	0.3
				59	2.4	84	0.2
				60	2.1	85	0.1
				61	2.4	86	0.2
				62	2.1	87	0.1
				63	2.2	88	0.1
				64	1.5	89	0.1
				65	1.5	90	0.1
				66	1.0	91	0.1
				67	0.6	92	0.1
				68	0.6	93	0.0
				69	0.6	94	0.0
				70	0.5	95	0.0
				71	0.9	96	0.0
		47	0.5	72	0.8	97	0.0
		48	1.8	73	0.6	98	0.0
		49	7.7	74	0.5	99	0.0
		50	3.1	75	0.7	100	0.0

Total 82.1


Deposition (gallons per acre)
South (feet)
19 JUL 1963
0455 HRS.
FOG BANK SE-W
Date : 19 July 1963
Flight # : 2
Sample Line : D
Type Atomized : Limited, 3 GPM
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 045 Degrees
Time of Release : 0451 Hours
Remarks : 451 hours

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 465 GPM

DATE: 19 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 3

AIRSPEED: 130 Knots

SAMPLE LINE: D

ALTITUDE: 100 Feet

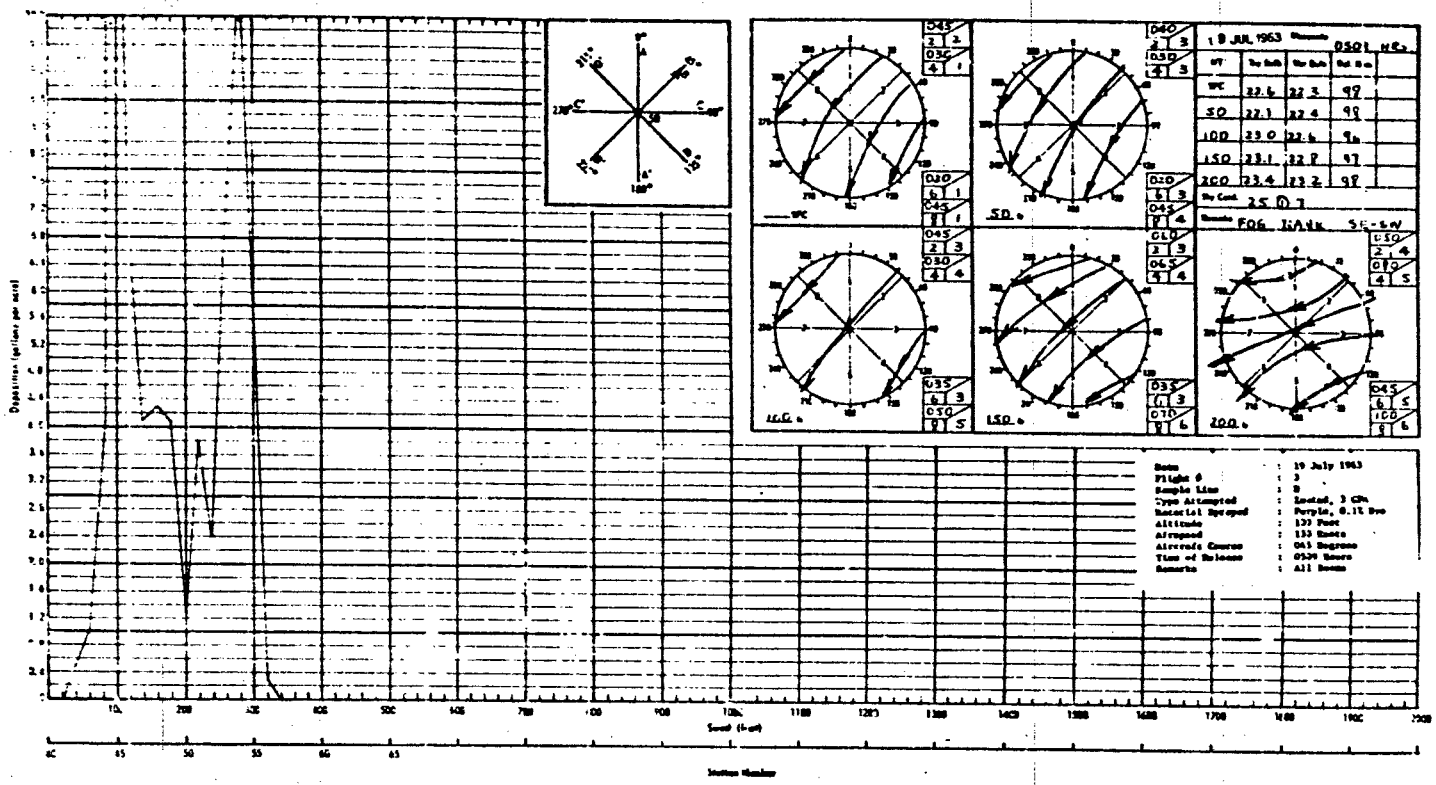
TIME OF RELEASE: 0509 Hours

AIRCRAFT COURSE: 045 Degrees

DURATION: 11 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 41 Blank							
42	0.5						
43	1.0						
44	4.1						
45	21.7						
46	7.0						
47	4.1						
48	4.3						
49	4.1						
50	1.3						
51	3.8						
52	2.4						
53	6.5						
54	12.3						
55	5.8						
56	0.3						
Stations 57 - 100 Blank							

Total 79.2


Dispersion (grains per acre)
Scale (feet)
Station Number
19 JUL 1963
0501 HRS
WPC 22.6 22.3 99
50 22.1 22.4 99
100 23.0 22.6 98
150 23.1 22.8 97
200 23.4 23.2 98
FOG BANK SE-SW
Date : 19 July 1963
Flight # : 3
Sample Line : 8
Type Attempted : Instant, 3 GPA
Material Sprayed : Purple, 0.1% Dye
Altitude : 100 Feet
Airspeed : 100 Knots
Aircraft Course : 045 Degrees
Time of Release : 0530 Hours
Remarks : All Boom

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 95 GPM

DATE: 19 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 4

AIRSPEED: 130 Knots

SAMPLE LINE: D

ALTITUDE: 150 Feet

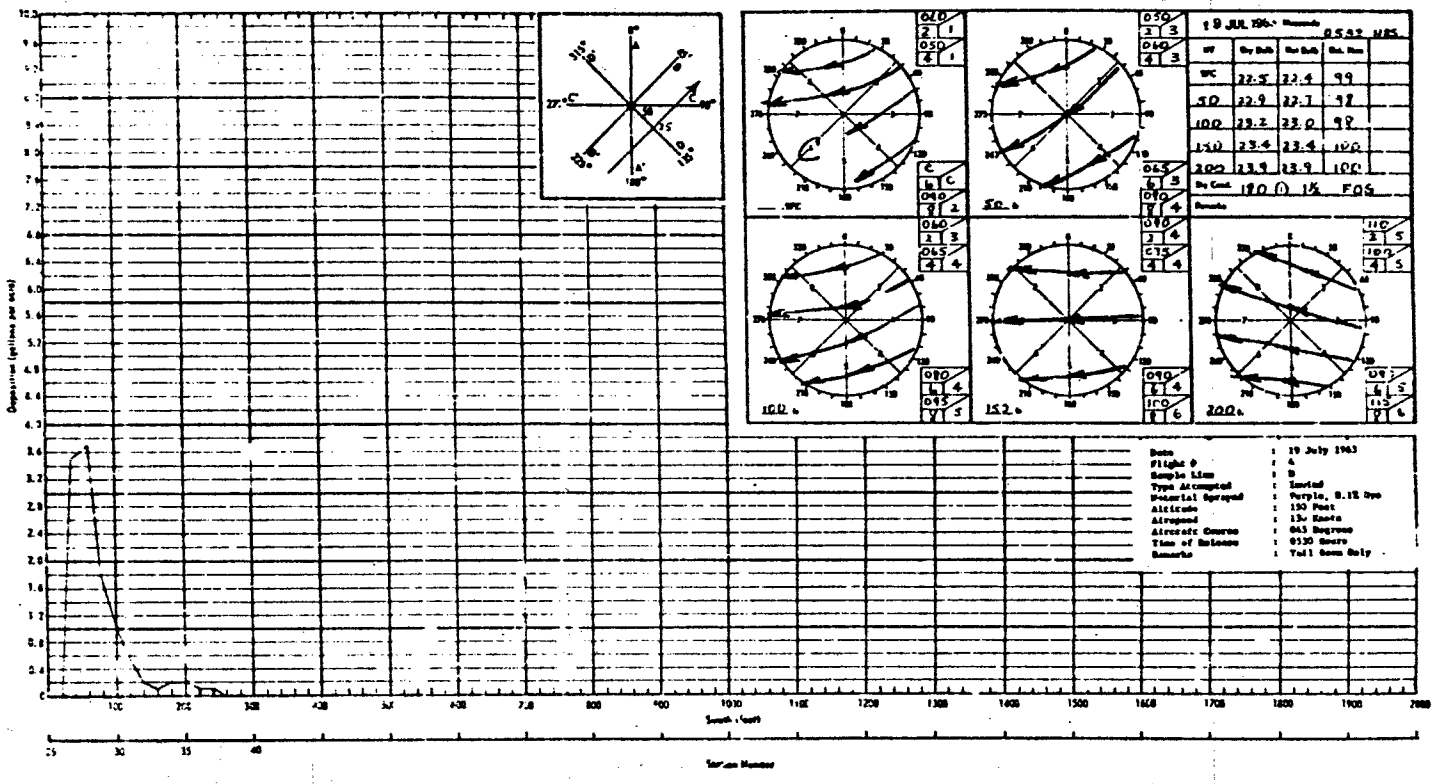
TIME OF RELEASE: 0530 Hours

AIRCRAFT COURSE: 045 Degrees

DURATION: 10 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 25 Blank		26	0.0				
		27	3.5				
		28	3.7				
		29	1.8				
		30	1.0				
		31	0.6				
		32	0.2				
		33	0.1				
		34	0.2				
		35	0.2				
		36	0.1				
		37	0.1				
		Stations 38 - 100 Blank					

Total 11.5


Deposition (gallons per acre)
South (feet)
Station Number
19 JUL 1963
0542 HRS
Date : 19 July 1963
Flight # : 4
Sample Line : B
Type Attempted : Inverted
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 135 Knots
Aircraft Course : 045 Degrees
Time of Release : 0530 Hours
Remarks : Tail Boom Only

MASS DEPOSIT

MATERIAL: Purple

DATE: 19 July 1963

FLIGHT #: 5

SAMPLE LINE: D

TIME OF RELEASE: 0531 Hour

DURATION: 11 Sec.

FLOW RATE: 95 GPM

SYSTEM: C-123/MC-1

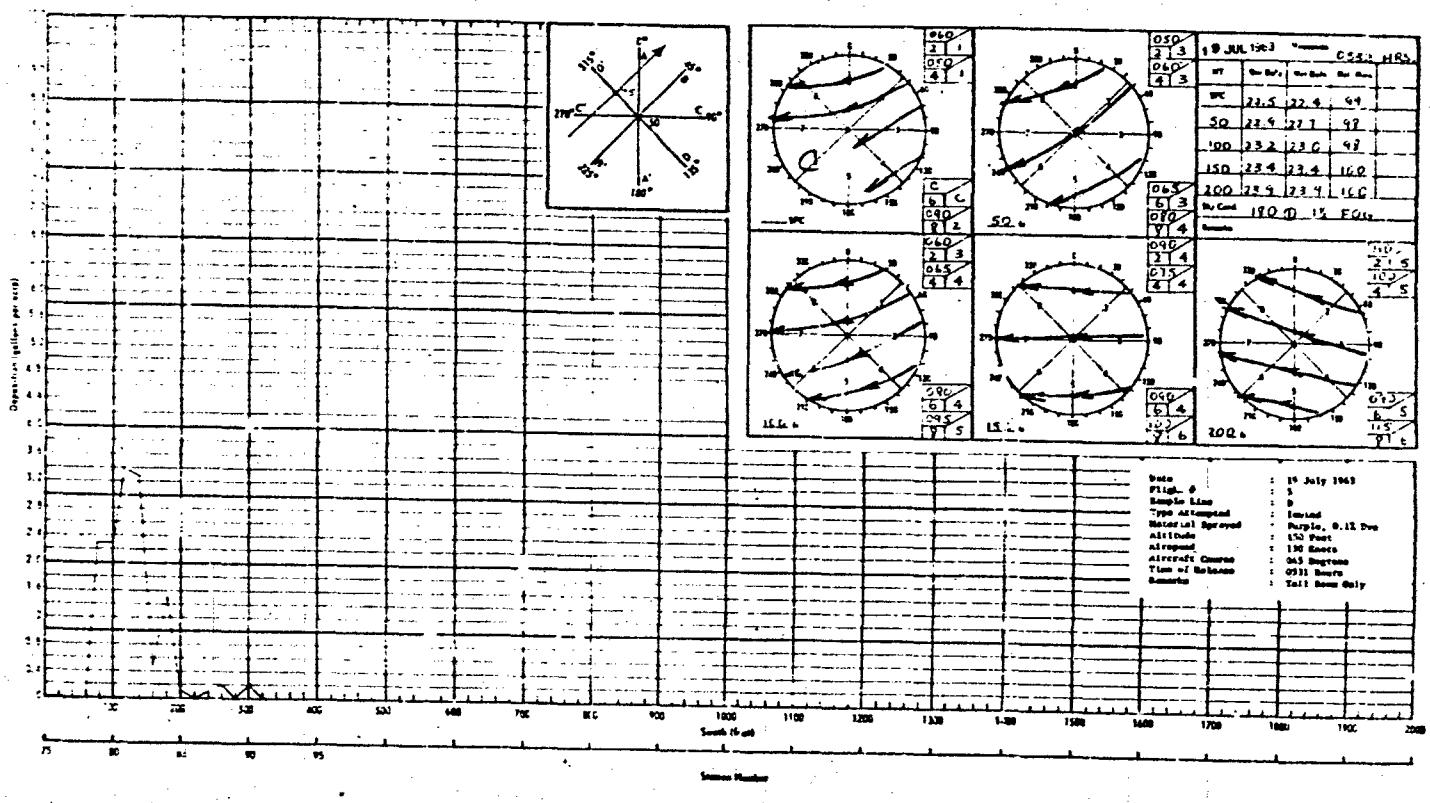
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 045 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 78 Blank						79	2.3
						80	2.3
						81	3.4
						82	3.3
						83	0.5
						84	1.5
						85	0.1
						86	0.0
						87	0.1
						88	0.2
						89	0.1
						90	0.2
						91	0.0
						92	0.0
						93	0.0
						94	0.0
						Stations 95 - 100 Blank	

Total 14.8


Deposition (gallons per acre)
South (feet)
Station Number
19 JUL 1963
0533 HRS
SFC
50
100
150
200
Date : 19 July 1963
Flight # : 5
Sample Line : 9
Type Attempted : Inverted
Material Sprayed : Purple, 0.1% Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 063 Degrees
Time of Release : 0531 Hours
Remarks : Tail Boom Only

MASS DEPOSIT

MATERIAL: Purple

DATE: 19 July 1963

FLIGHT #: 6

SAMPLE LINE: A

TIME OF RELFASE: 0547 Hours

DURATION: 11 Sec.

FLOW RATE: 4'5 GPM

SYSTEM: C-123/MC-1

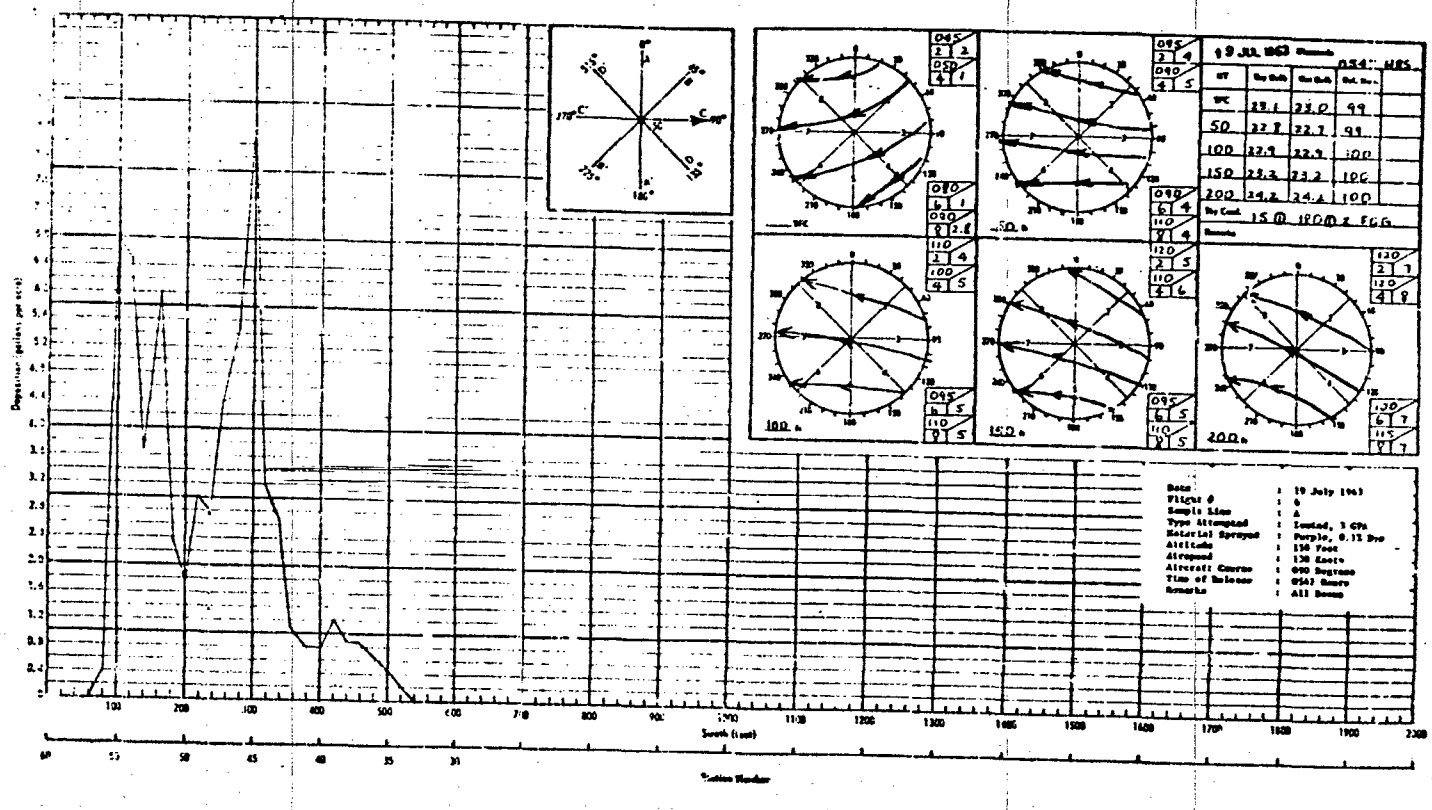
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 090 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 33 Blank		34	0.2				
		35	0.5				
		36	0.7				
		37	0.9				
		38	0.9				
		39	1.2				
		40	0.8				
		41	0.8				
		42	1.1				
		43	2.7				
		44	3.2				
		45	8.4				
		46	5.5				
		47	4.4				
		48	2.8				
		49	3.0				
		50	1.8				
		51	2.4				
		52	6.0				
		53	3.7				
		54	6.5				
		55	6.8				
		56	0.4				
		Stations 57 - 100 Blank					

Total 64.7


Deposition (gallons per acre)
South (feet)
Station Number
Date : 19 July 1963
Flight # : 6
Sample Line : A
Type Attempted : Instead, 3 GPA
Material Sprayed : Purple, 0.15 Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 090 Degrees
Time of Release : 0543 Hours
Remarks : All Boom
19 JUL 1963
0543 HRS
SFC
50
100
150
200
15 @ 180 @ 5 GG
100 m
150 m
200 m

MASS DEPOSIT

MATERIAL: Purple

DATE: 19 July 1963

FLIGHT #: 7

SAMPLE LINE: A

TIME OF RELEASE: 0605 Hours

DURATION: 15 Sec.

FLOW RATE: 430 GPM

SYSTEM: C-123/MC-1

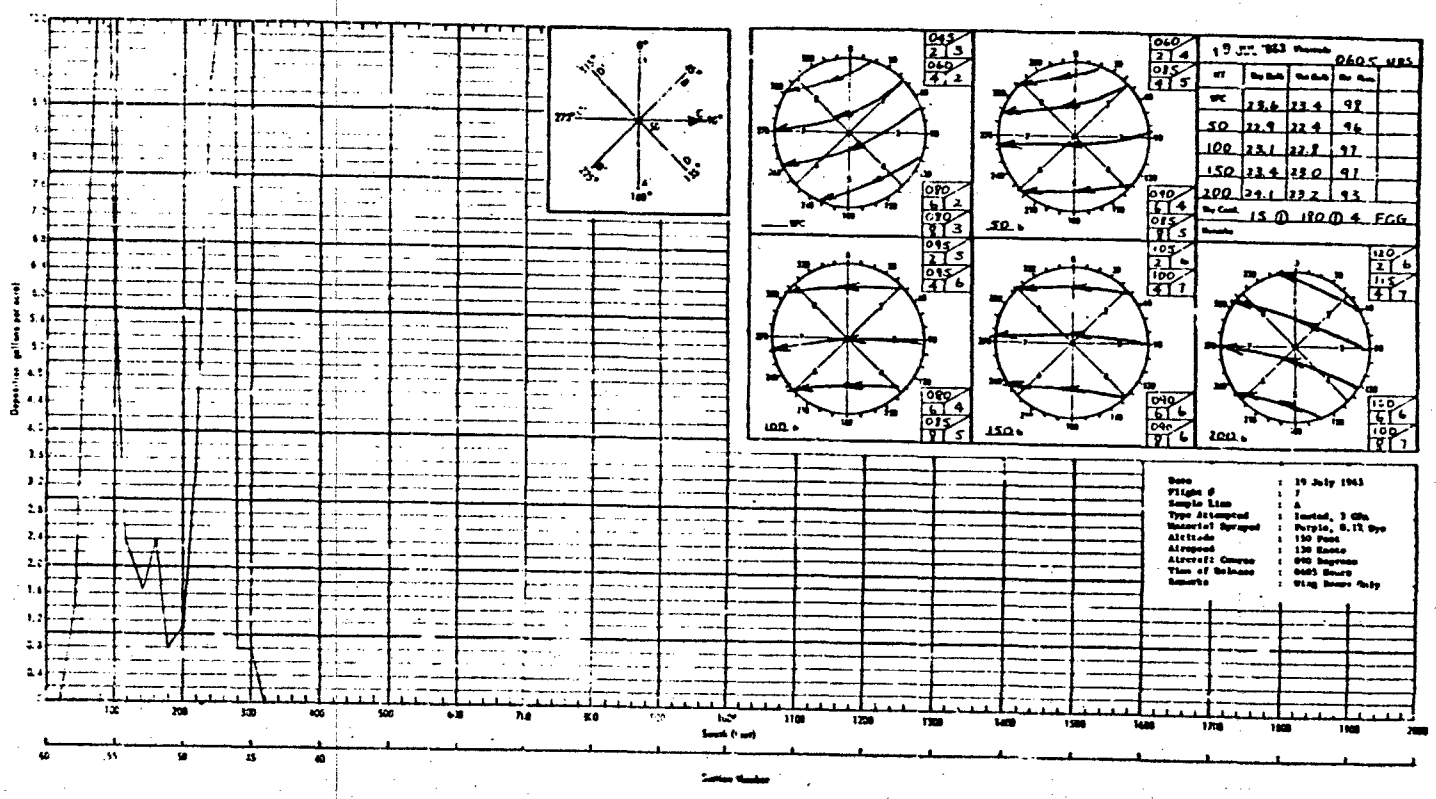
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 090 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 44 Blank				45	0.8		
				46	0.8		
				47	19.5		
				48	9.2		
				49	3.5		
				50	1.1		
				51	0.8		
				52	2.4		
				53	1.7		
				54	2.4		
				55	5.8		
				56	14.7		
				57	5.9		
				58	1.4		
				Stations 59 - 106 Blank			

Total 69.0


Deposition gallons per acre
Search (feet)
Section Number
19 July 1963
0605 hrs
WC
50
100
150
200
15 @ 180 @ 4 FGG
Date : 19 July 1963
Flight # : 7
Sample Line : A
Type Attempted : Inverted, 3 GPA
Material Sprayed : Purple, 0.75 Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 090 Degrees
Time of Release : 0605 Hours
Remarks : Night Hours Only

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 290 GPM

DATE: 19 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 8

AIRSPEED: 130 Knots

SAMPLE LINE: A

ALTITUDE: 150 Feet

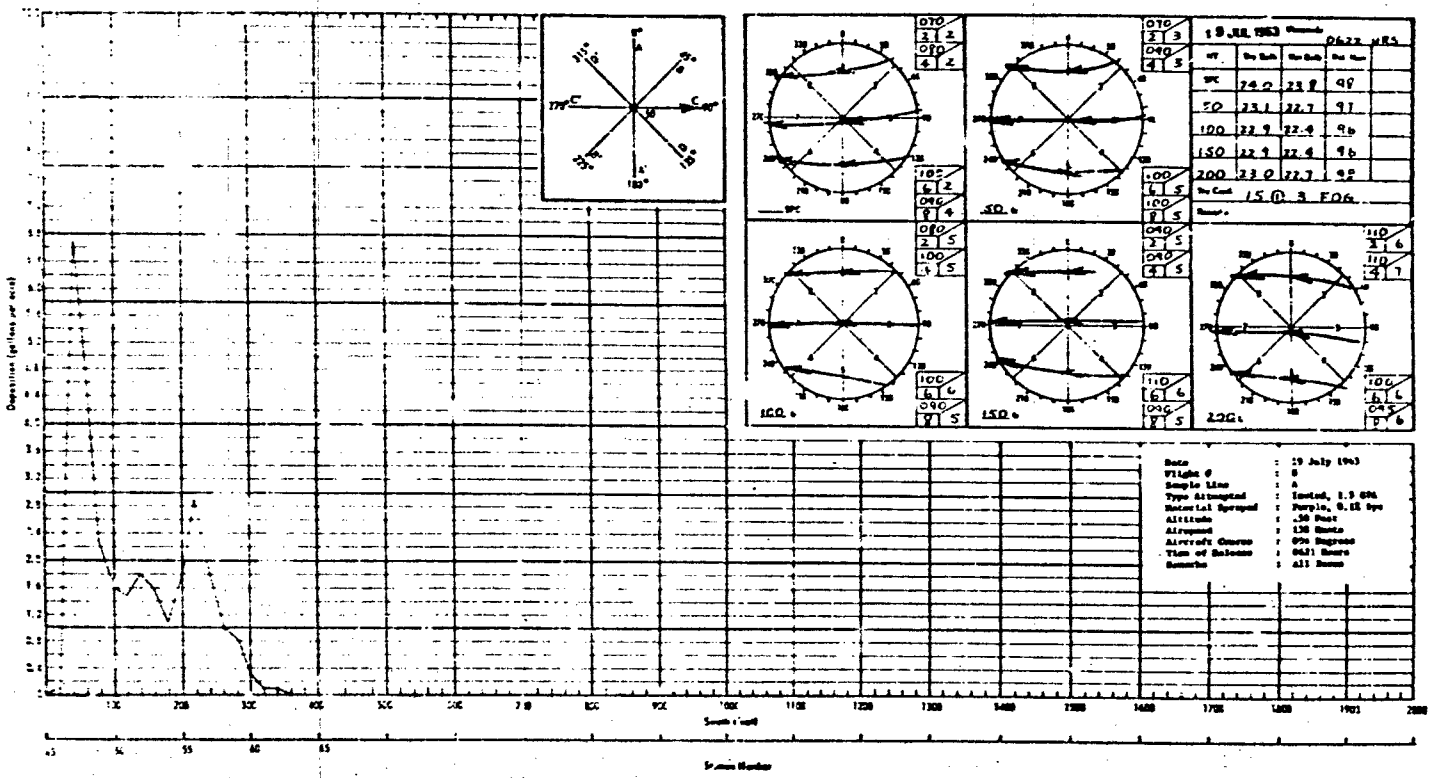
TIME OF RELEASE: 0621 Hours

AIRCRAFT COURSE: 090 Degrees

DURATION: 09 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 45 Blank				46	0.1		
				47	6.7		
				48	4.8		
				49	2.3		
				50	1.6		
				51	1.5		
				52	1.8		
				53	1.6		
				54	1.1		
				55	1.8		
				56	2.9		
				57	1.9		
				58	1.0		
				59	0.8		
				60	0.3		
				61	0.1		
				62	0.1		
				63	0.0		
				Stations 64 - 100 Blank			

Total 30.4


Deposition (gallons per acre)
Seconds
Sample Number
Date : 19 July 1963
Flight # : 8
Sample Line : A
Type Atomizer : Instant, 1.5 GPM
Material Sprayed : Purple, 0.15 lps
Altitude : 50 Feet
Airspeed : 130 Knots
Aircraft Course : 070 Degrees
Time of Release : 0621 Hours
Remarks : All Boom
19 JUL 1963
0622 HRS
SPC 74.0 23.8 99
50 23.1 22.7 97
100 22.9 22.4 96
150 22.9 22.4 96
200 23.0 22.7 99
15 @ 3 FOG
SPC
50
100
150
200

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 44 GPM

DATE: 19 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 9

AIRSPEED: 130 Knots

SAMPLE LINE: C

ALTITUDE: 150 Feet

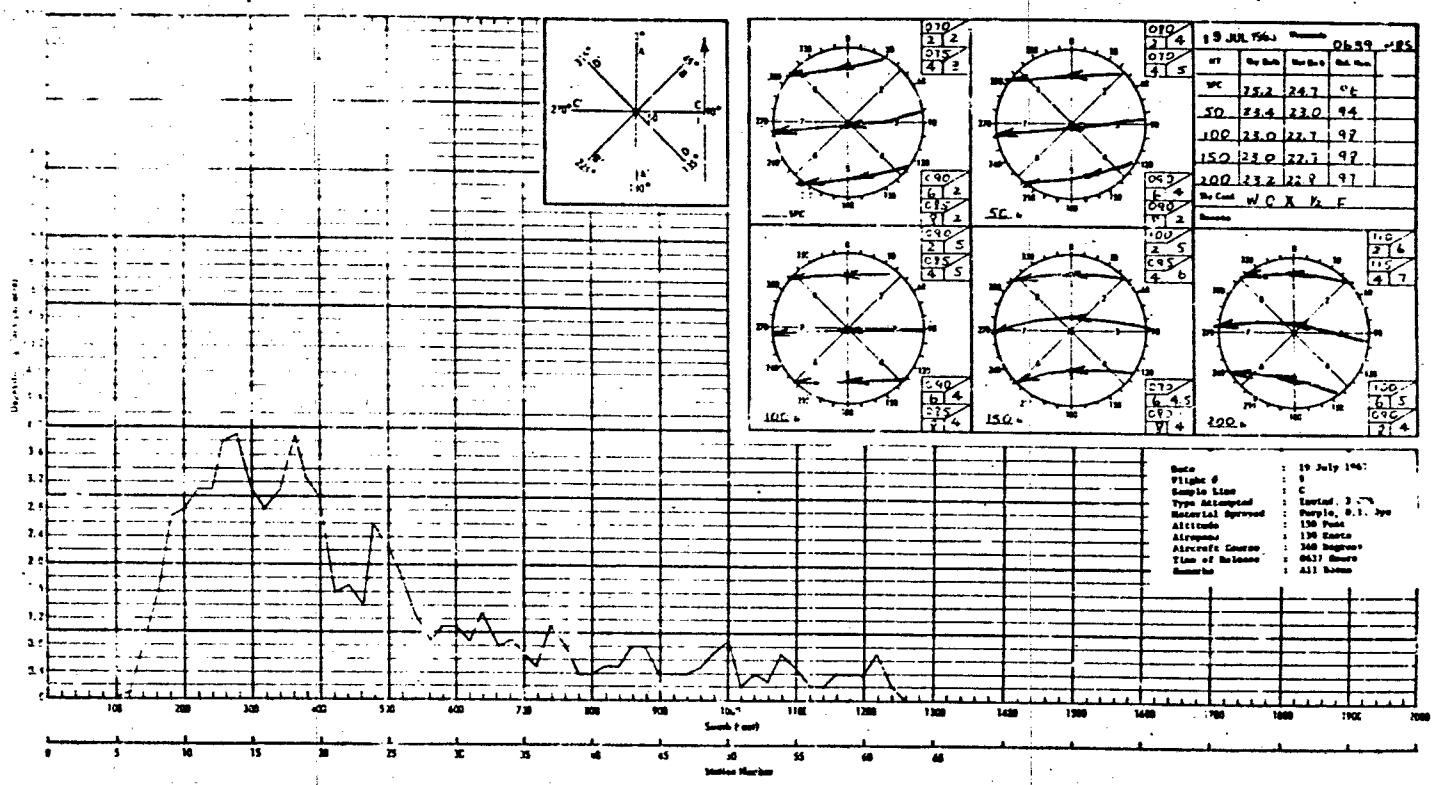
TIME OF RELEASE: 0637 Hours

AIRCRAFT COURSE: 360 Degrees

DURATION: 08 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 5 Blank		30	1.1	55	0.5		
6	0.1	31	0.9	56	0.2		
7	0.8	32	1.3	57	0.2		
8	1.6	33	0.8	58	0.4		
9	2.7	34	0.9	59	0.4		
10	2.8	35	0.7	60	0.4		
11	3.1	36	0.5	61	0.7		
12	3.1	37	1.1	62	0.2		
13	3.8	38	0.8	Stations 63 - 100 Blank			
14	3.9	39	0.4				
15	3.1	40	0.4				
16	2.8	41	0.5				
17	3.1	42	0.5				
18	3.9	43	0.8				
19	3.3	44	0.8				
20	3.0	45	0.4				
21	1.6	46	0.4				
22	1.7	47	0.4				
23	1.4	48	0.5				
24	2.6	49	0.7				
25	2.2	50	0.9				
26	1.9	51	0.2				
27	1.3	52	0.[illegible]				
28	0.9	53	0.3				
29	1.1	54	0.7				

Total 75.2


19 JUL 1967
0659
SFC
50
100
150
200
Date : 19 July 1967
Flight # : 9
Sample Line : C
Type Attempted : Instant, 2.
Material Sprayed : Purple, 0.1. Dye
Altitude : 150 Feet
Airspeed : 130 Knots
Aircraft Course : 360 Degrees
Time of Release : 0637 Hours
Remarks : All Known
Seconds (sec)
Station Number

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 20 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: [illegible]

NOZZLE TYPE: Check valves only

LIQUID TEMP: 35° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-44

PUMP R.P.M.: 3200-2600

FLOW METER READING: 47[illegible] GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED 480 GPM

TOTAL AMOUNT SPRAYED: 120 Gal.

NOZZLE CONFIGURATION:
WING: 1-7, 13-42 Underside; 1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
1	3200	90		470
8	3000 (26 GPA)	85		450
9	3200	90		465

REMARKS: All booms, 3 GPA.
All odd numbered openings on underside of boom have ½" check valve #6[illegible]
All even numbered openings on underside of boom have ½" check valve #[illegible]
All openings on aft side have ½" check valve #6140
All openings on tail boom are on aft side. Opening number 1-4 & 10-13 are ½" check valve #6135. Openings numbered 5-15 are ½" check valve #6140. Tail check valve flow are perpendicular to air stream.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 20 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 98

NOZZLE TYPE: Check valves only

LIQUID TEMP: 34.5° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-45

PUMP R.P.M.: 3200-2550

FLOW METER READING: 435 GPM

NO. OF PUMPS: 2

FLOW RATE CALIBRATED: 442 GPM

TOTAL AMOUNT SPRAYED: 110.5 Gal.

NOZZLE CONFIGURATION: 1-7, 13-42 Underside
WINGS: 1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
2	3200	90		440
7	3000 (2 GPA)	80		410

REMARKS: Wings only, 3 GPA.
All odd numbered openings on underside of boom have ½" check Valve #6130.
All even numbered openings on underside of boom have ½" check valve #6135.
All openings on aft side have ½" check valve #6140.

C-1[illegible]/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: [illegible]

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 110

NOZZLE TYPE: Check valves only

LIQUID TEMP: 36° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-2[illegible]

PUMP R.P.M.: 3200-2400

FLOW METER READING [illegible]

NO. OF PUMPS: 1

FLOW RATE CALIBRATED [illegible] GPM

TOTAL AMOUNT SPRAYED: 69.5 Gal.

NOZZLE CONFIGURATION:
WING: 1-7, 13-42 Underside
1-4, 19-22, 37-40 Aft side
TAIL: 1-6, 14-19

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
3	3200	90		280
4	3000 (1 GPA)	80		230

REMARKS: All booms.
Nozzle arrangement same as Runs #1, #6, & #9.

C-123/MC-1 GROUND FLOW & FLIGHT DATA

DATE CALIBRATED: 17 July 1963

DATE TEST FLOWN: 20 July 1963

LIQUID SPRAYED: Purple

TOTAL NOZZLES OPEN: 98

NOZZLE TYPE: Check valves only

LIQUID TEMP: 36° C

DURATION OF SPRAY: 15 Sec.

PUMP PRESSURE: 90-32

PUMP R.P.M.: 3200-2500

FLOW METER READING: 280 GPM

NO. OF PUMPS: 1

FLOW RATE CALIBRATED: 280 GPM

TOTAL AMOUNT SPRAYED: 70 Gal.

NOZZLE CONFIGURATION: WING: 1-7, 13-42 Underside
1-4, 19-22, 37-40 Aft side

OPERATIONAL DATA DURING TEST FLIGHT

RUN #	RPM	PSI BEFORE	PSI DURING	GPM FLOWMETER
5	3100 (1 CPA)	85		240
6	3200	90		230

REMARKS: Nozzle arrangement same as Runs #2 and #7.

MASS MEDIAN DIAMETER

DATE: 20 July 1963 CONVERSION FACTOR [illegible]

FLIGHT #: 9 PAPER [illegible]

SAMPLE LINE: A MATERIAL: [illegible]

FLOW RATE: 465 GPM SYSTEM: C-121 MC-1

STA.	DROP #	SIZE	STA.	DROP #	SIZE
3	1	6500*			
3	3	6400			
3	2	6300			
3	5	6200			
3	6	6100			
3	4	6000	73	1A	[illegible]
3	7	5900			
3	8	5800			
3	9	5700			
3	10	5600			

$$MMD = \frac{70.4440.1431\,(\text{Spot D Max})}{\text{Con. Factor}} = \frac{70.4440.1431(5600)}{[illegible]} = [illegible]$$

Max. Sph. Dia. = 70.4440.1431 (Max Spot) = 70.4440.1431 ([illegible]) = [illegible] Microns

Min. Sph. Dia. = 61 Microns

MASS DEPOSIT

MATERIAL: Purple

DATE: 20 July 1963

FLIGHT #: 1

SAMPLE LINE: A

TIME OF RELEASE: 0430 Hours

DURATION: 11 Sec.

FLOW RATE: 470 GPM

SYSTEM: C-123/MC-1

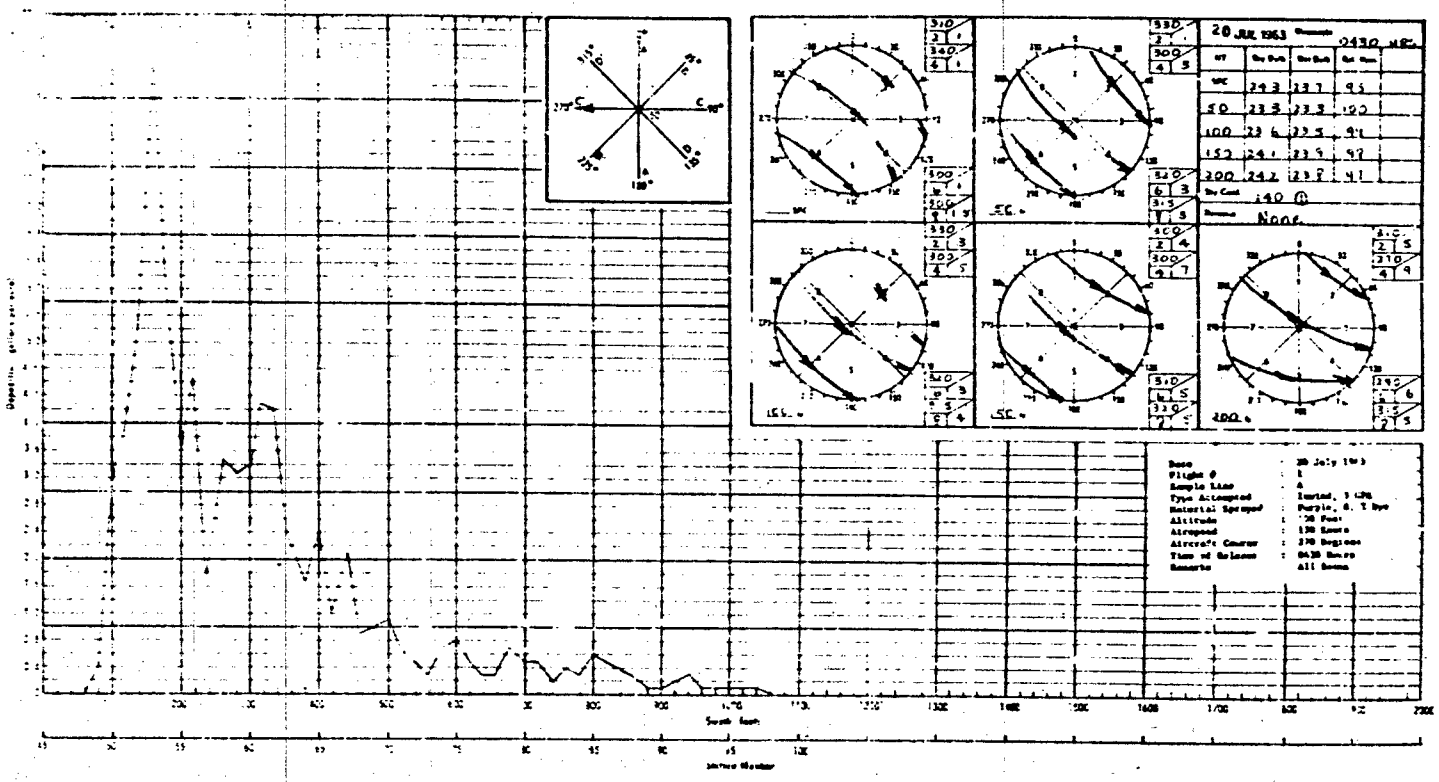
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 270 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 48 Blank				51	3.9	76	0.5
				52	5.4	77	0.3
				53	9.3	78	0.3
				54	6.0	79	0.7
				55	3.7	80	0.5
				56	4.7	81	0.5
				57	1.8	82	0.2
				58	3.5	83	0.4
				59	3.3	84	0.3
				60	3.4	85	0.6
				61	4.3	86	0.5
				62	4.2	87	0.4
				63	2.4	88	0.3
				64	1.7	89	0.1
				65	2.4	90	0.1
				66	1.2	91	0.2
				67	2.1	92	0.3
				68	0.9	93	0.1
				69	1.0	94	0.1
				70	1.1	95	0.1
				71	0.7	96	0.1
				72	0.5	97	0.1
				73	0.3	Stations 98 - 100	
		49	0.4	74	0.7	Blank	
		50	3.2	75	0.8		

Total 79.6


20 JUL 1963
0430 HRS
None
Date
Flight #
Sample Line
Type Actuated
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
All Scans

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 440

DATE: 20 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 2

AIRSPEED: 130 Knots

SAMPLE LINE: B

ALTITUDE: 150 Feet

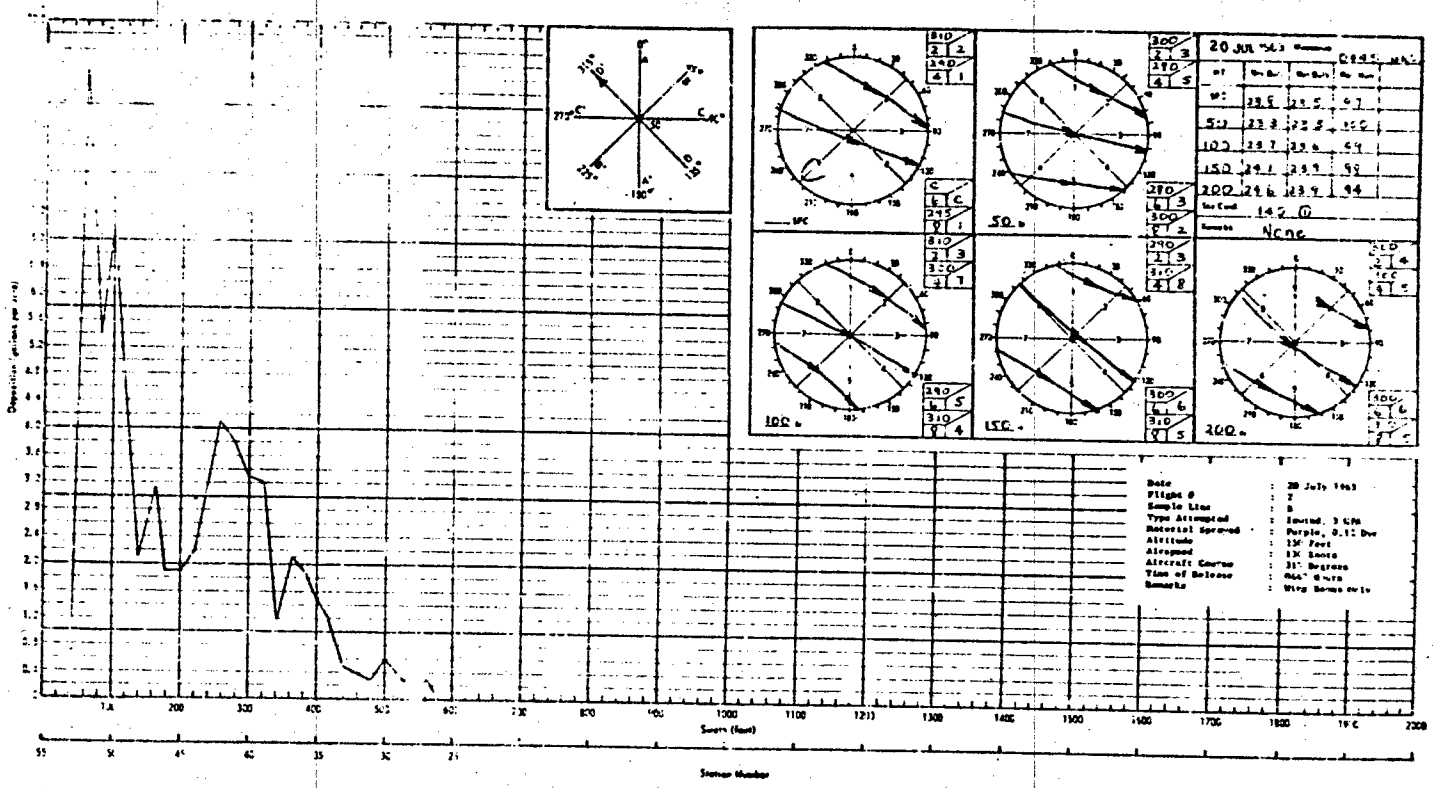
TIME OF RELEASE: 0447 Hours

AIRCRAFT COURSE: 315 Degrees

DURATION: 14 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 24 Blank		25	0.0	50	6.9		
		26	0.0	51	5.4		
		27	0.3	52	9.3		
		28	0.2				
		39	0.3				
		30	0.6				
		31	0.3				
		32	0.4				
		33	0.5				
		34	1.2				
		35	1.5				
		36	1.9				
		37	2.1				
		38	1.2				
		39	3.2				
		40	3.3				
		41	3.8				
		42	4.1				
		43	3.3				
		44	2.2				
		45	1.9				
		46	1.9				
		47	3.1				
		48	2.1				
		49	4.2				

Total 65.2


Deposition (gallons per acre)
Swath (feet)
Station Number
50 ft
100 ft
150 ft
200 ft
20 JUL
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: Purple

DATE: 20 July 1963

FLIGHT #: 3

SAMPLE LINE: B

TIME OF RELEASE: 0503 Hours

DURATION: 11 Sec.

FLOW RATE: 280 GPM

SYSTEM: C-123/MC-1

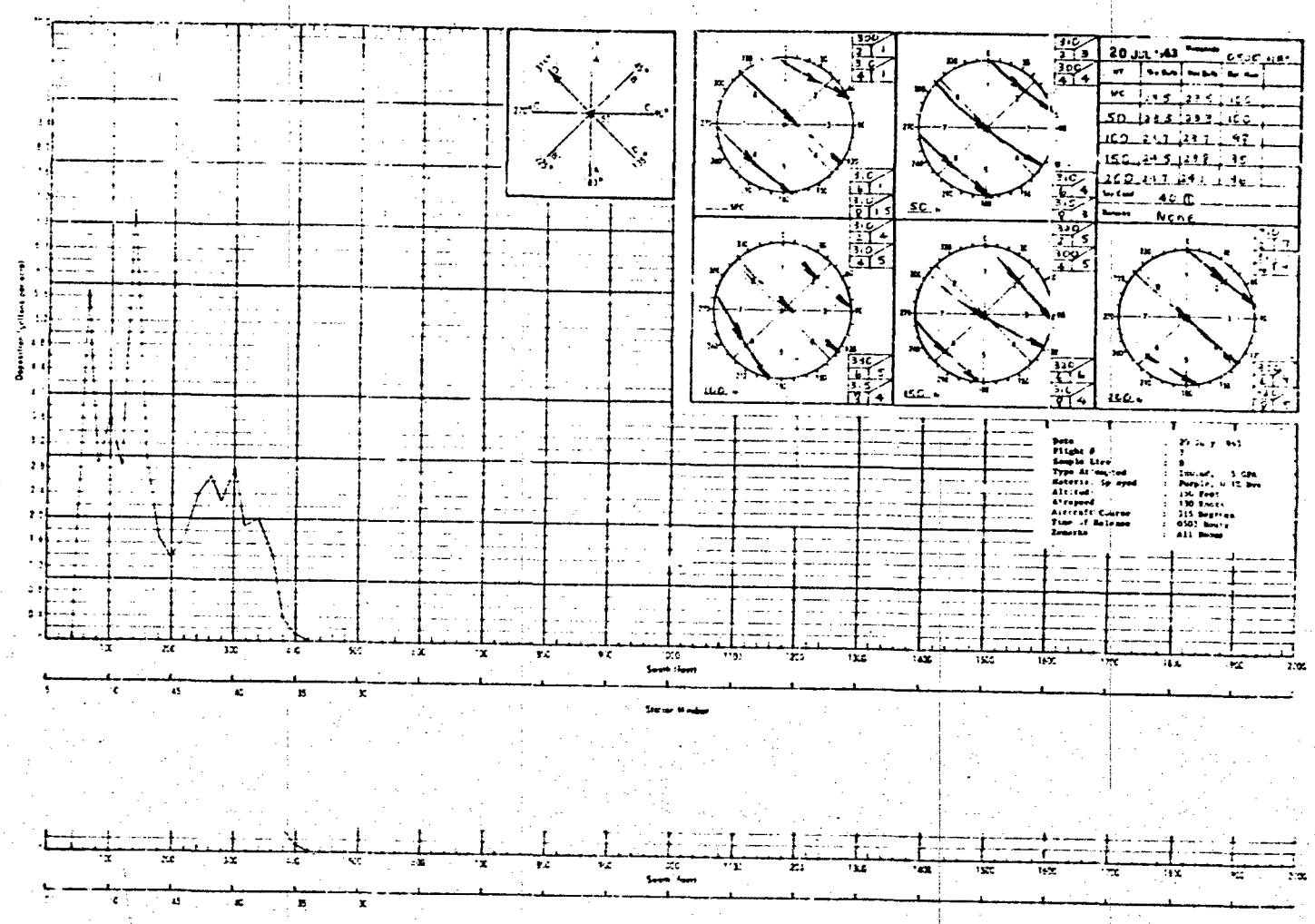
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 315 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 33 Blank		34	0.0						
		35	0.1						
		36	0.4						
		37	1.4						
		38	2.0						
		39	1.9						
		40	2.8						
		41	2.3						
		42	2.7						
		43	2.4						
		44	1.7						
		45	1.4						
		46	1.7						
		47	2.9						
		48	7.0						
		49	2.9						
		50	3.6						
		51	2.9						
		52	5.7						
		Stations 53 - 100 Blank							

Total 45.8


Deposition (Fibers per cm²)
Sample Number
Sample Hours
20 JUL '63
None
Date
Flight #
Sample Line
Type Aerosol
Aircraft Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: Purple

DATE: 20 July 1963

FLIGHT #: 4

SAMPLE LINE: B

TIME OF RELEASE: 0520 Hours

DURATION: 13 Sec.

FLOW RATE: 230 (23

SYSTEM: C-123/MC-1 C-12

AIRSPEED: 130 Knot 130

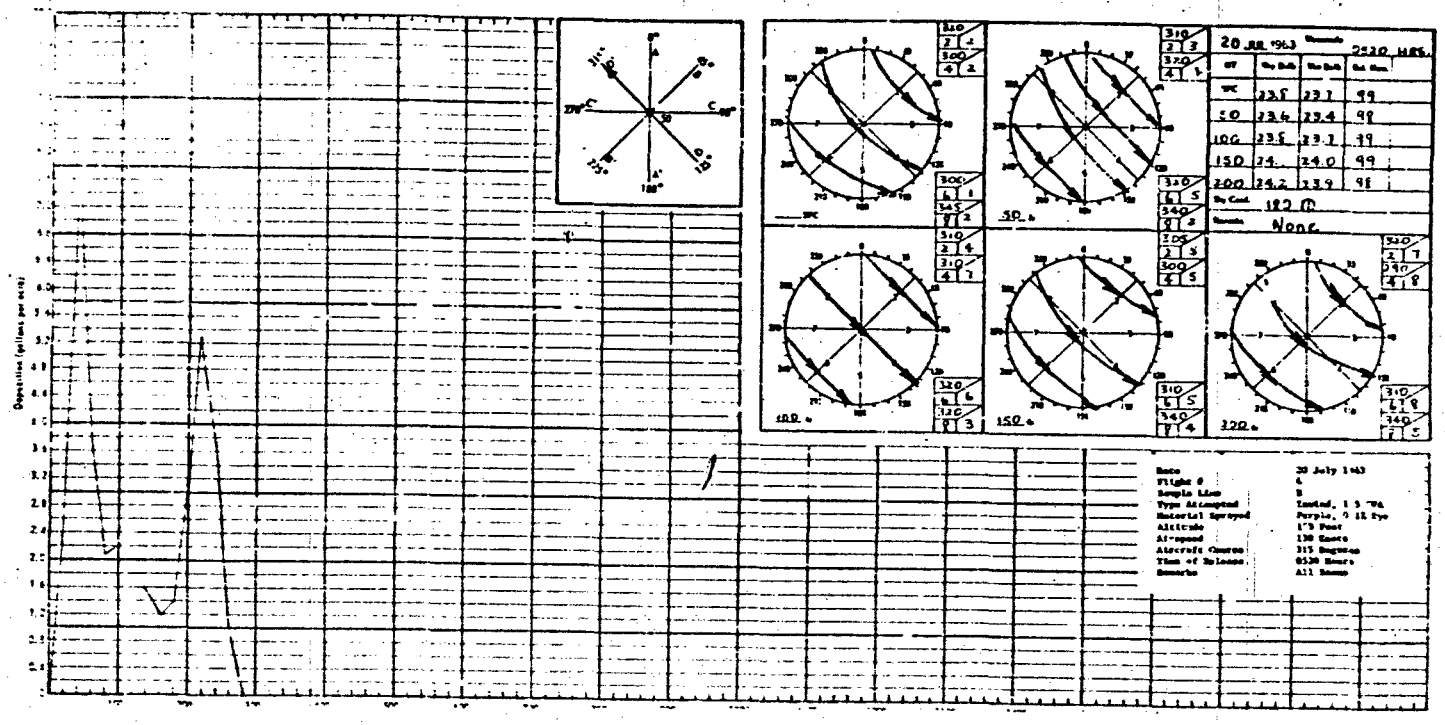
ALTITUDE: 150 Feet Fe 150 F

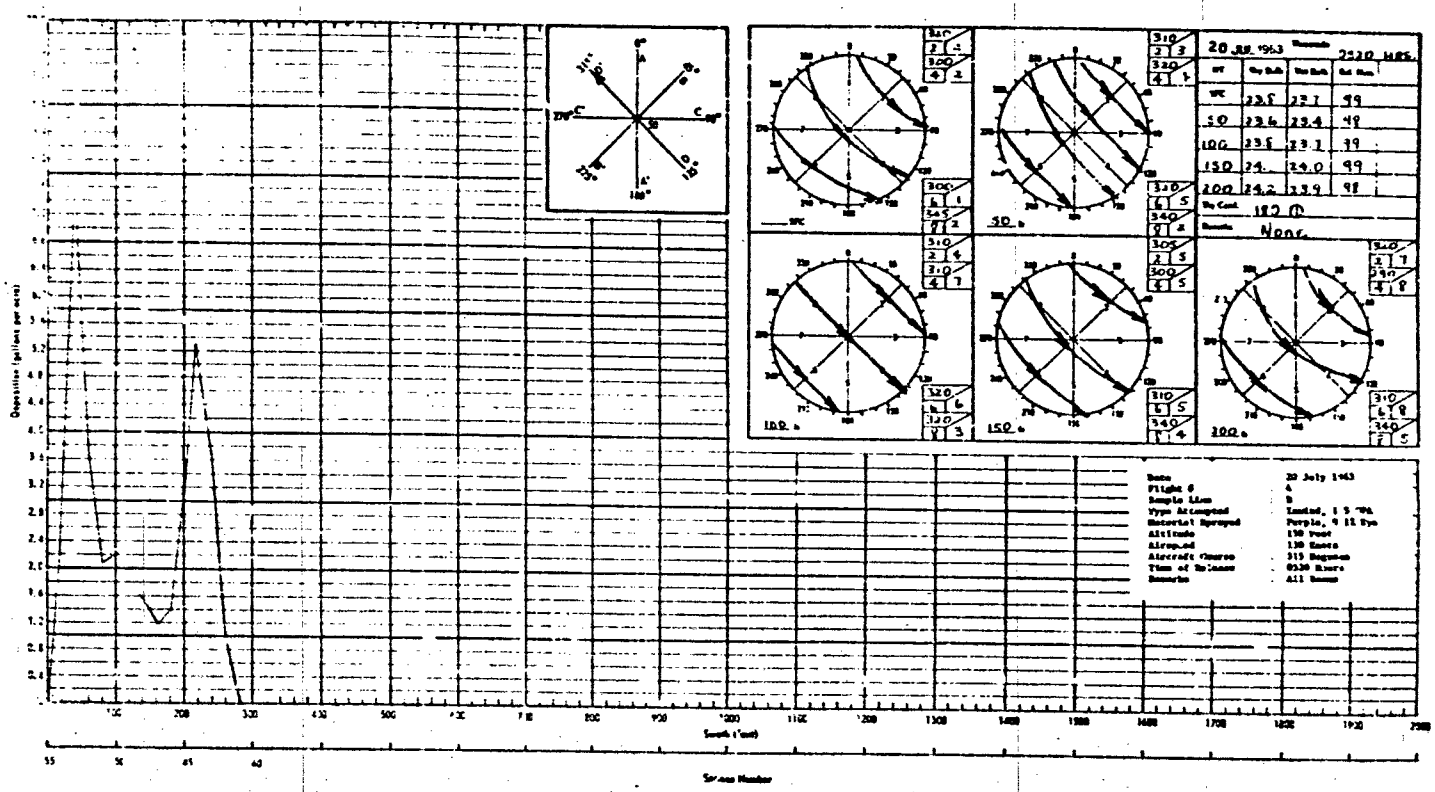
AIRCRAFT COURSE: 315 Degr JRSE: 3

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A	S
Stations 1 - 39 Blank		40	0.0					
		41	0.0					
		42	1.0					
		43	3.7					
		44	5.3					
		45	3.1					
		46	1.4					
		47	1.2					
		48	1.6					
		49	*					
		50	2.2					
		51	2.1					
		52	3.6					
		53	7.5					
		54	2.2					
		Stations 55 - 100 Blank						

*Missing

Total 34.9


Deposition (gallons per acre)
20 JUL 1963
2520 HRS.
Remarks
None
Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
20 July 1963
Purple, 9 lb Dye
179 Feet
130 Knots
315 Degrees
0520 Hours
All Boom


Deposition (gallons per acre)
South (feet)
Screen Number
20 JUL 1963
Remarks
0520 HRS.
WPC
50
100
150
200
Wind Cont.
180 ft
Remarks
None.
Date
Flight #
Sample Line
Type Arranged
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
20 July 1963
4
B
Purple, 9 lb Dye
150 feet
130 knots
315 Degrees
0520 Hours
All Same

MASS DEPOSIT

MATERIAL: Purple

DATE: 20 July 1963

FLIGHT #: 5

SAMPLE LINE: B

TIME OF RELEASE: 0538 Hours

DURATION: 12 Sec.

FLOW RATE: 240 GPM

SYSTEM: C-123/MC-1

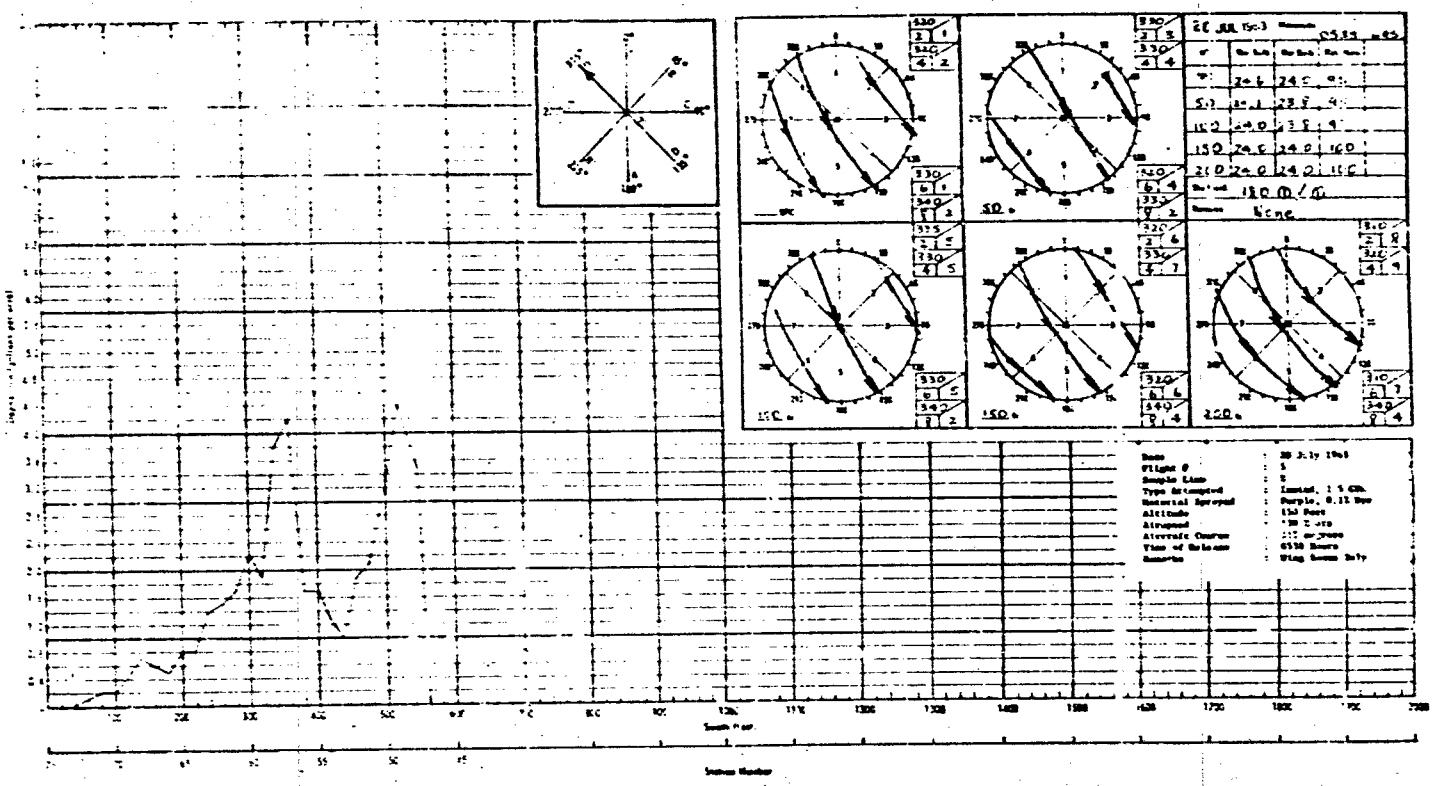
AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 315 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 47 Blank				48	3.5	Stations 73 - 100 Blank	
				49	4.4		
				50	3.3		
				51	2.1		
				52	1.9		
				53	1.0		
				54	1.3		
				55	1.7		
				56	1.7		
				57	4.2		
				58	3.8		
				59	1.9		
				60	2.2		
				61	1.7		
				62	1.5		
				63	1.4		
				64	0.8		
				65	0.8		
				66	0.5		
				67	0.6		
				68	0.7		
				69	0.4		
				70	0.2		
				71	0.2		
				72	0.1		

Total 41.9


Date
Flight #
Sample Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks
None

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 180 GPM

DATE: 20 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 6

AIRSPEED: 130 Knots

SAMPLE LINE: B

ALTITUDE: 150 Feet

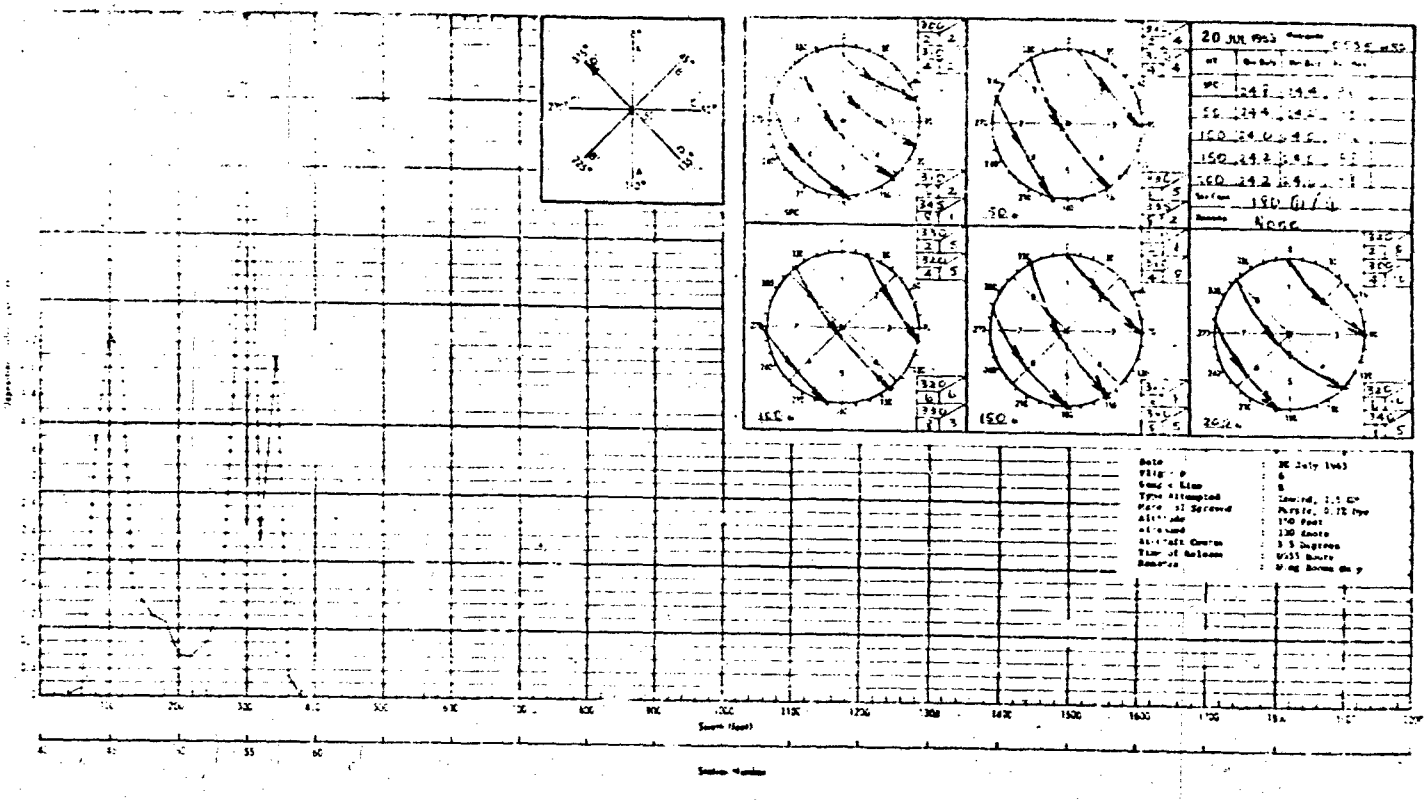
TIME OF RELEASE: 0555 Hours

AIRCRAFT COURSE: 315 Degrees

DURATION: 13 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 42 Blank							
43	0.1						
44	3.7						
45	5.3						
46	5.0						
47	1.6						
48	1.2						
49	1.1						
50	0.6						
51	0.6						
52	0.8						
53	1.4						
54	5.0						
55	10.2						
56	2.3						
57	5.0						
58	0.3						
Stations 59 - 100 Blank							

Total 35.2


20 JUL 1963
None
Date
Flig - 6
Type Attempted
Aircraft Course
Time of Release
Remarks

MASS DEPOSIT

MATERIAL: Purple

DATE: 20 July 1963

FLIGHT #: 7

SAMPLE LINE: B

TIME OF RELEASE: 0511 Hours

DURATION: 12 Sec.

FLOW RATE: 410 GPM

SYSTEM: C-123/MC-1

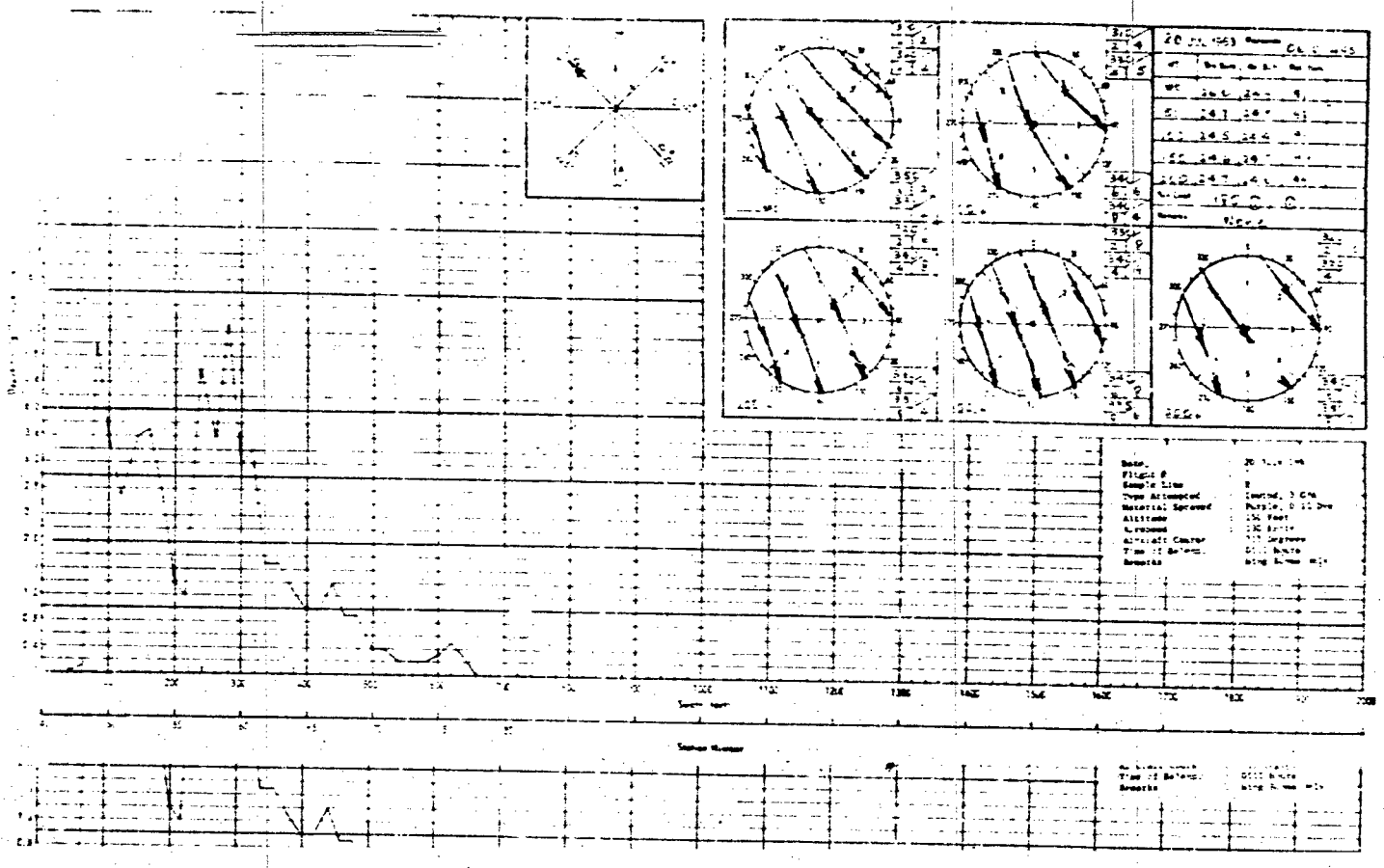
AIRSPEED: 130 Knot

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 315 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 47 Blank				55	1.4		
				56	1.2		
				57	4.6		
				58	3.6		
				59	5.3		
				60	3.2		
				61	3.4		
				62	1.7		
				63	1.7		
				64	1.3		
				65	1.0		
				66	1.0		
				67	1.6		
				68	[illegible]		
				69	[illegible].9		
				70	[illegible].4		
				71	[illegible]		
				[illegible]	[illegible]		
		48	0.1	73	0.2		
		49	5.0	74	0.2		
		50	3.6	75	[illegible].3		
		51	2.7	76	[illegible].5		
		52	3.6	77	[illegible].3		
		53	3.7	78	[illegible].0		
		54	2.7	Stations 79 - 100 Blank			

Total 56.5



MASS DEPOSIT

MATERIAL: Purple

DATE: 20 July 1963

FLIGHT #: 8

SAMPLE LINE: C

TIME OF RELEASE: 0629 Hours

DURATION: 14 Sec.

FLOW RATE: 430

SYSTEM: C-123/MC-1

AIRSPEED: 130

ALTITUDE: 150

AIRCRAFT COURSE: 360

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATIO
Stations 1 - 14 Blank		26	0.2			
		27	0.3			
		28	0.5			
		29	0.4			
		30	1.3			
		31	1.1			
		32	1.5			
		33	1.5			
		34	1.5			
		35	1.7			
		36	3.3			
		37	3.1			
		38	2.1			
		39	2.5			
15	0.5	40	2.7			
16	0.1	41	4.8			
17	0.1	42	4.9			
18	0.2	43	6.7			
19	0.5	44	4.6			
20	0.4	45	3.6			
21	0.4	46	2.8			
22	0.4	47	1.4			
23	0.5	48	1.6			
24	0.2	49	0.3			
25	0.3	Stations 50 - 100 Blank				

Total 56.5

MASS DEPOSIT

MATERIAL: Purple

FLOW RATE: 430 GPM

DATE: 20 July 1963

SYSTEM: C-123/MC-1

FLIGHT #: 8

AIRSPEED: 130 Knots

SAMPLE LINE: C

ALTITUDE: 150 Feet

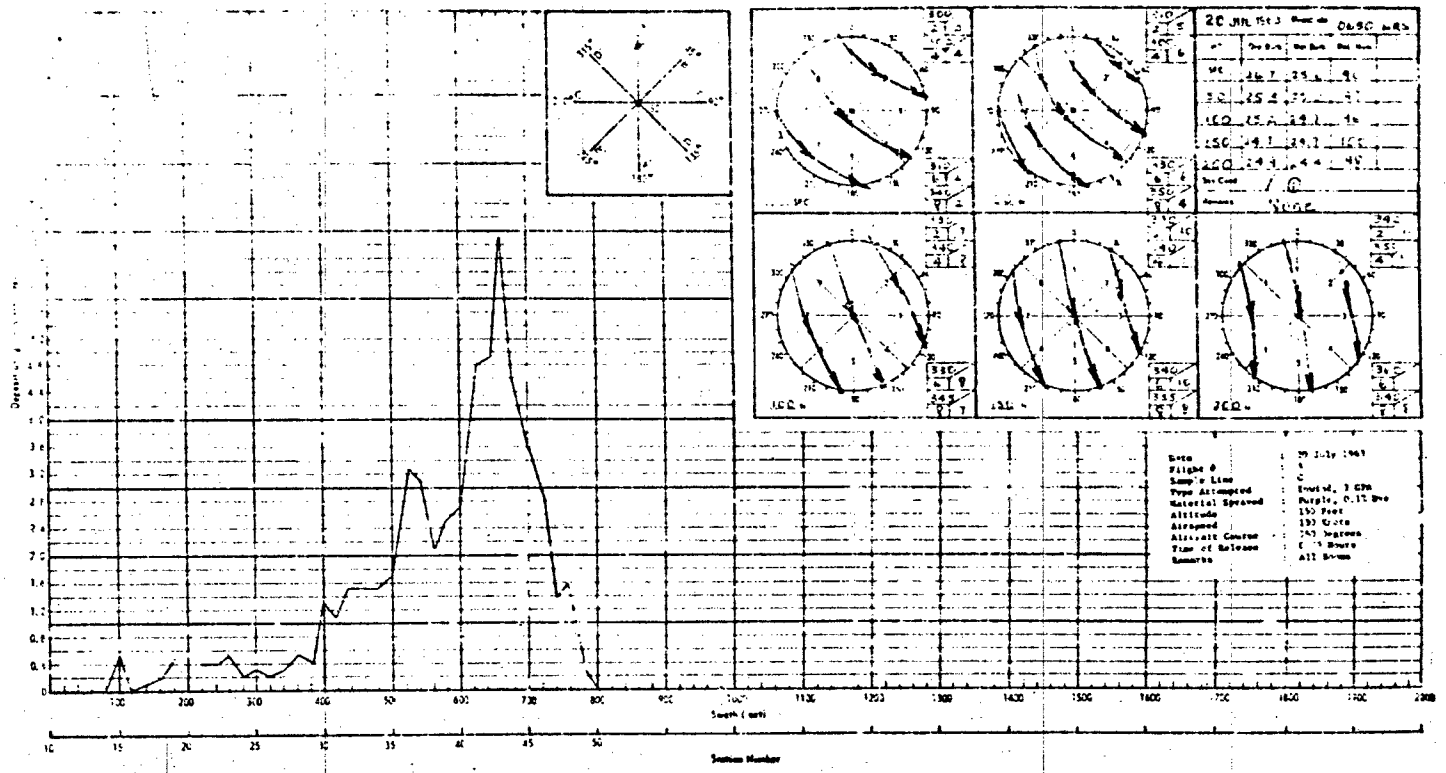
TIME OF RELEASE: 0629 Hours

AIRCRAFT COURSE: 360 Degrees

DURATION: 14 Sec.

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
Stations 1 - 14 Blank		26	0.2				
		27	0.3				
		28	0.5				
		29	0.4				
		30	1.3				
		31	1.1				
		32	1.5				
		33	1.5				
		34	1.5				
		35	1.7				
		36	3.3				
		37	3.1				
		38	2.1				
		39	2.5				
15	0.5	40	2.7				
16	0.1	41	4.8				
17	0.1	42	4.9				
18	0.2	43	6.7				
19	0.5	44	4.6				
20	0.4	45	3.6				
21	0.4	46	2.8				
22	0.4	47	1.4				
23	0.5	48	1.6				
24	0.2	49	0.3				
25	0.3	Stations 50 - 100 Blank					

Total 56.5


Deposit
Swath (cm)
Station Number
Date
Flight #
Samp'r Line
Type Attempted
Material Sprayed
Altitude
Airspeed
Aircraft Course
Time of Release
Remarks

MASS DEPOS.

[illegible] : Purpl

[illegible]

[illegible] 9

[illegible]

[illegible] Oc[illegible]

DURA[illegible] Se

FLOW RA. 465 CPM

SYSTEM: C-[illegible]/MC-1

AIRSPEED: 130 Knots

ALTITUDE: 150 Feet

AIRCRAFT COURSE: 270 Degrees

STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.	STATION	G.P.A.
1	Blank	26	1.3	51	0.3		
2		27	0.7	[illegible]	[illegible]		
[illegible]	0.3	28	0.5	[illegible]	.2		
4	1.9	[illegible]	[illegible]	[illegible]	0.2		
5	2.7	[illegible]	[illegible].6	Stations 55 - 100 Blank			
6	[illegible]	31	0.[illegible]				
7	5.2	32	0.3				
8	4.7	33	0.9				
9	3.0	34	0.5				
10	2.1	35	0.2				
11	3.2	36	0.5				
12	[illegible].5	37	0.5				
13	5.[illegible]	38	0.6				
14	[illegible]	39	1.6				
15	[illegible]	40	1.1				
16	1.[illegible]	41	1.5				
17	1.7	42	1.6				
18	[illegible]	43	1.3				
19	[illegible]	[illegible]	[illegible]				
20	[illegible].9	[illegible]	[illegible]				
21	0.7	46	0.5				
22	0.6	47	0.3				
23	1.3	48	0.3				
24	1.3	49	0.3				
25	1.3	50	0.6				

Total 77.5